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PROCEEDINGS

OF THE

LEGISLATIVE COUNCIL

OF THE GOVERNOR OF MADRAS

OFFICIAL REPORT

FOURTH SESSION OF THE THIRD LEGISLATIVE COUNCIL
UNDER THE GOVERNMENT OF INDIA ACT, 1919

Thursday, the 27th March 1930



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MADRAS

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THE LEGISLATIVE COUNCIL OF THE GOVERNOR OF MADRAS.

Thursday, the 27th March 1930.

The House met at 11 o'clock, Mr. President (the hon. Rao Bahadur C. V. S. NARASIMHA RAJU Garu) in the Chair.

PRESENT:

Usman Sahib Bahadur, *Kt.*, The hon. Khan Bahadur Sir Mahomed.
Krishnan Nayar, The hon. Diwan Bahadur Sir M.
Campbell, C.S.I., C.I.E., C.B.E., V.D., I.C.S., The hon. Mr. A. Y. G.
Stokes, C.S.I., C.I.E., The hon. Mr. H. G.
Subbarayan, The hon. Dr. P.
Muthiah Mudaliyar, The hon. Mr. S.
Seturatnam Ayyar, The hon. Mr. M. R.
Abdul Hameed Khan Sahib Bahadur.
Abdul Razack Sahib Bahadur, Khan Bahadur S. K.
Appavu Chettiyar, Mr. C. D.
Ari Gowder, Mr. H. B.
Arogyaswami Mudaliyar, Diwan Bahadur R. N.
Arpudaswami Udayar, Mr. S.
Balasubrahmanya Mudaliyar, Mr. M.
Bhanoji Rao, Mr. A. V.
Bheemayya, Mr. J.
Bhooshayya, Mr. P.
Chidambaranatha Mudaliyar, Mr. T. K.
Cotterell, C.I.E., I.C.S., Mr. C. B.
Dorai Raja, Mr. S. N.
Ellappa Chettiyar, Rao Bahadur S.
Foulkes, Mr. R.
Gangadhara Siva, Mr. M. V.
Gnanavaram Pillai, Rao Sahib P. J.
Gopala Menon, Mr. C.
Govindaraja Mudaliyar, Mr. C. S.
Govinda Rao Nayudu, Rao Bahadur P.
Gray, O.B.E., I.C.S., Mr. J.
Guruswami, Rao Sahib L. C.
Harisarvottama Rao, Mr. G.
Harichandrudu Nayudu, Mr. A.
Hilton Brown, I.C.S., Mr.
James, Mr. F. E.
John, Mr. V. Ch.
Kesava Rama Murthy Nayudu, Mr. K.
Khadir Mohidin Sahib Bahadur, Muhammad.
Khalif-ul-lah Sahib Bahadur, Khan Bahadur P.
Koti Reddi, Mr. K.
Krishnan, Mr. K.
Krishnaswami Nayakar, Mr. K. V.
Kumara Raja of Venkatagiri.
Kumaraswami Reddiyar, Diwan Bahadur S.
Lakshmana Reddi, Mr. G.
Leach, I.C.S., Mr. A. G.
Leech, Mr. A. J.
Luker, Mr A. T.
Maharaja of Pithapuram, O.B.E.
Mahmud Schamnad Sahib Bahadur, Khan Bahadur.
Mallayya, Dr. B. S.
Manikkavelu Nayakar, Mr. M. A.
Meera Ravuttar Bahadur, Mr. K. P. V. S. Muhammad.
Muniswami Pillai, Rao Sahib V. I.
Muppil Nayar of Kavalappara.
Muthulakshmi Reddi, Dr. (Mrs.) S. (*Deputy President*).
Nagan Gowda, Mr. R.
Nanjappa Bahadur, Subadar-Major S. A.
Narasimha Rao, Mr. Mothay.
Narayanan Chettiyar, Mr. Al. Ar.
Natesa Mudaliyar, Rao Bahadur C.
Premayya, Mr. G. R.
Raja of Kallikota.
Rajan, Mr. P. T.
Ramachandra Reddi, Mr. B.
Ramalinga Chettiyar, Rao Bahadur T. A.
Ramamurti, I.C.S., Mr. S. V.
Raman Menon, Mr. K. P.
Ramanath Goenka, Mr.
Ramaswami Ayyar, Mr. T. S.
Ramjee Rao, Mr. V.
Ranganatha Mudaliyar, Mr. A.
Ratnasabhapati Mudaliyar, Rao Bahadur C. S.
Sahajanandam, Swami A. S.
Saldanha, Mr. J. A.
Sami Venkatachalam Chetti, Mr.
Sarabha Reddi, Mr. K.
Shetty, Mr. A. B.
Sitarama Reddi, Rao Bahadur K.
Siva Raj, Mr. N.
Soundara Pandian, Mr. W. P. A.
Srinivasa Ayyangar, Mr. T. C.
Srinivasa Rao, Mr. Nagar.
Srinivasan, Rao Sahib R.
Subrahmanya Moopanar, Mr. S.
Suryanarayana Ayyar, Mr. K. V.
Tajudin Sahib Bahadur, Khan Sahib Syed.
Uppi Sahib Bahadur, K.
Vanavudaiya Goundar, Mr. S. V.
Venkataramaiya Nayudu, Rao Sahib Badeti.
Watson, I.C.S., Mr. H. A.
Wood, Mr. C. E.
Zamindar of Singampatti.

I

QUESTIONS AND ANSWERS.

STARRED QUESTIONS

Public Services

Indianization of the superior services.

*1651 Q.—Mr. J. A. SALDANHA : With reference to appendix to answer to question No. 255, dated 14th March 1927, will the hon. the Member for Revenue be pleased so far as the Presidency of Madras is concerned

(1) to furnish a statement showing the latest developments as to the indianization of the superior services as recommended by the Lee Commission and approved by the Secretary of State ;

(2) to state the percentage of Indians on 1st January 1929 and 1st January 1930, in the several departments of the superior services dealt with by the Lee Commission ?

A.—A statement [a] is laid on the table of the House.

Mr. J. A. SALDANHA :—" Referring to page 4 of the appendix may I enquire why the percentage of Indians in the Indian Civil Service which was 34 last year has increased only to 37 in January 1930 ? May I enquire at this rate whether it will be possible to reach in 15 years the percentage that has been recommended by the Lee Commission."

The hon. Mr. A. Y. G. CAMPBELL :—" Arrangements have been made in order to carry out the recommendations of the Lee Commission."

Mr. J. A. SALDANHA :—" May I know what are the steps taken by the Government ? I find that at the rate at which you are going on, you cannot reach the 50 per cent in 15 years."

The hon. the PRESIDENT :—" That is a matter of opinion."

Mr. ABDUL HAMEED KHAN :—" May I know from the hon. the Revenue Member how many Indians are there among the 23 I.M.S. officers that are in Civil employ ? "

The hon. Mr. A. Y. G. CAMPBELL :—" I must ask for notice of the question."

Mr. ABDUL HAMEED KHAN :—" May I know if the Government will be pleased to tell us how many Indians there were three years ago ? "

The hon. Mr. A. Y. G. CAMPBELL :—" I must ask for notice of this question too."

Mr. J. A. SALDANHA :—" With reference to the Forest service the same reply as is now given in the appendix to the answer to this question was given two years ago, viz. 'that the orders of the Secretary of State have not yet been received'. Having regard to the fact that the recommendations of the Lee Commission are very clear, viz., that 75 per cent of officers recruited to the Forest Service should be Indians and only 25 per cent Europeans, I want to know why the Government have not carried out the recommendations of the Lee Commission without waiting for the Secretary of State's orders which are pending for a long time ? "

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[a] Printed as Appendix I on page 674 infra.

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The hon. Mr. A. Y. G. CAMPBELL :—" The Forest service is one of the Imperial services which is under the control of the Secretary of State and not under the control of the local Government."

Mr. G. HARISARVOTTAMA RAO :—" May I know from the hon. the Revenue Member since when this question has been under correspondence between the local Government and the Imperial Government, in what stage the correspondence is and whether he can tell us when the question is likely to be settled ? "

The hon. Mr. A. Y. G. CAMPBELL :—" I cannot say when the question will be settled."

Mr. G. HARISARVOTTAMA RAO :—" May I know when the question was last discussed ? "

The hon. Mr. A. Y. G. CAMPBELL :—" I am afraid I do not know. I must ask for notice."

Rao Bahadur C. S. RATNASABHAPATI MUDALIYAR :—" The number of Europeans has fallen from 43 to 41 on the 1st January 1930. I want to know why there has not been a corresponding increase in the number of Indians. May I know whether these vacancies have been caused by the retirement of Europeans and have not therefore been filled up ? "

The hon. Mr. A. Y. G. CAMPBELL :—" I must ask for notice of the question."

Religious and Charitable Endowments

Appointment of the Commissioners of the Hindu Religious Endowments Board.

* 1652 Q.—Mr. M. BALASUBRAHMANYA MUDALIYAR : Will the hon. the Minister for Education and Local Self-Government be pleased to state—

(a) whether the term of office of the Commissioners of the Madras Hindu Religious Endowments Board expires shortly ;

(b) whether the Government propose to consult the Madras Services Commission or not regarding the appointment to the Board ; and

(c) whether the Government have received any applications written or oral from persons belonging to the self-respect movement for appointment to the said offices ?

A.—(a) Yes.
(b) No.
(c) The Government have no official cognizance of the personnel of the self-respect movement.

Mr. M. BALASUBRAHMANYA MUDALIYAR :—" May I know whether the Government consider that the persons who belong to the self-respect movement do not believe in idolatry and as such are disqualified to hold the post of Commissioners on the Hindu Religious Endowments Board ? "

The hon. Dr. P. SUBBARAYAN :—" I do not think they are disqualified."

Mr. M. BALASUBRAHMANYA MUDALIYAR :—" May I know whether the Government propose to consider this question before making appointments in future ? "

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The hon. Dr. P. SUBBARAYAN :—" They have considered this question already and I do not think there is any necessity to further consider the same."

Mr. M. BALASUBRAHMANYA MUDALIYAR :—" May I know whether the Government are aware that one of the chief objects of the self-respect movement is to put an end to idolatry and temple worship ? "

The hon. Dr. P. SUBBARAYAN :—" That may be so. But that does not disqualify one belonging to that movement from becoming a Commissioner as the Board is concerned only with the administration of endowments."

Mr. G. HARISARVOTTAMA RAO :—" May I know whether it is not inconsistent with the position of the hon. Minister to be in charge of the portfolio of Hindu Religious Endowments and at the same time not to believe in idolatry ? "

The hon. the PRESIDENT :—" The question does not arise."

Mr. B. RAMACHANDRA REDDI :-- " May I know exactly when the term of office of the Commissioners of the Hindu Religious Endowments Board is going to expire and when these offices are going to be refilled ? "

The hon. Dr. P. SUBBARAYAN :—" The term will expire on 6th April 1930. When the vacancies will be filled up I cannot say."

Provincialization of the Hindu Religious Endowments Board.

*1653 *Q.*—Mr. A. B. SHETTY : Will the hon. the Minister for Education and Local Self-Government be pleased to state whether the Government have considered the question of paying contributions out of provincial revenues to the Hindu Religious Endowments Board and have arrived at any decision thereon?

A.—No decision has been arrived at as yet.

Mr. A. B. SHETTY :—" With reference to the answer given to this question may I know how long this matter has been under consideration ? "

The hon. Dr. P. SUBBARAYAN :—" It has been under consideration for over two years, but it has not been possible to arrive at a decision early, considering that there is an alternative proposal that the collection of dues to the Endowments Board should be treated as part of land revenue and also that the Hindu Religious Endowments Board should be provincialized."

Rao Bahadur C. S. RATNASABHAPATI MUDALIYAR :—" May I know whether Government will take steps to waive the recovery of contributions to the Hindu Religious Endowments Board ? "

The hon. Dr. P. SUBBARAYAN :—" I cannot give an undertaking."

Mr. M. BALASUBRAHMANYA MUDALIYAR :—" May I know whether there is a proposal to divide the Hindu Religious Endowments Board into two bodies one to be vested with executive functions and the other judicial ? "

The hon. Dr. P. SUBBARAYAN :—" That is the proposal to be embodied in the new Bill. It is still under consideration."

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Mr. G. HARISARVOTTAMA RAO :—" May I know what the hon. Minister proposes to do with the existing Board and whether he will work it on the lines of the new Bill ? "

The hon. Dr. P. SUBBARAYAN :—" The hon. Member must remember that the whole Act will have to be worked as it is till the new Bill is passed and comes into force."

Mr. G. HARISARVOTTAMA RAO :—" May I know whether the new appointments have been made ? "

The hon. Dr. P. SUBBARAYAN : —" I have already said that no new appointments have been made."

Reduction of the number of Commissioners of the Hindu Religious Endowments Board.

*1654 Q.—Mr. A. B. SHETTY : Will the hon. the Minister for Education and Local Self-Government be pleased to state—

(a) whether any proposal for reducing the number of Commissioners of the Hindu Religious Endowments Board is being considered by the Government ; and

(b) if so, who has made this proposal and for what reasons ?

A.—There is no such proposal.

Medical

Proposed compensation to the Radiologist.

*1655 Q.—Diwan Bahadur P. C. ETHIRAJULU NAYUDU : Will the hon. the Minister for Public Health be pleased to state whether it is a fact that the Surgeon-General has submitted a scheme whereby Government will take over the private practice of Captain Barnard, the Radiologist, after paying him compensation ?

A.—Yes.

Mr. ABDUL HAMEED KHAN :—" May I know the amount of compensation that has been agreed to be paid to the radiologist ? "

The hon. Mr. S. MUTHIAH MUDALIYAR :—" It has not been settled yet."

Agriculture

Proceedings of the Agricultural Conference at Coimbatore.

*1656 Q.—Mr. A. B. SHETTY : Will the hon. the Minister for Development be pleased to state—

(a) what subjects were discussed at the conference of agricultural officers held last month at Coimbatore ; and

(b) what decisions were arrived at in regard to the questions considered at that conference ?

A.—(a) & (b) An extract [a] from the Proceedings of the Conference specifying the important subjects discussed and the findings thereon is appended.

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[a] Printed as Appendix II on pages 675-680 infra.

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Education

Reorganization of the Educational Department.

* 1657 *Q.*—Diwan Bahadur P. C. Ethirajulu Nayudu : With regard to the reorganization of the Educational Department, will the hon. the Minister for Education and Local Self-Government be pleased to state—

(*a*) the grounds on which the classification has been arrived at, as to the appropriate class of professors in different subjects ;

(*b*) whether it is a fact that this classification is based not on the importance of the subject, but on the present or future probable incumbent ; and

(*c*) the grounds on which the additional Professor of English, the Professor of Economics and the Professor of Sanskrit in the Presidency College are included in the Indian Educational Service, while the Professor of Physics, additional Professor of Physics, Professors of Zoology, History, Geology and Philosophy are in the Madras Educational Service ?

A—(*a*) G.O. No. 407, Law (Education), dated 8th March 1930, which has been laid on the table contains full information regarding the reorganization of the Indian Educational Service. The principles of the scheme are described below :—

Till recently the Superior Educational Services consisted of the Indian Educational Service and the Madras Educational Service. With a view to give effect to the Lee Commission's recommendations regarding the provincialization of the Indian Educational Service, it has been decided to constitute in the place of the Indian Educational Service a separate class (to be called class I) of the Madras Educational Service with a scale of pay lower than that sanctioned for the Indian Educational Service but higher than that of the existing Madras Educational Service (which is to be designated class II). In giving effect to this reorganization, the officer who now hold permanent posts in the Indian Educational Service cadre will have their existing scales of pay unaffected and for this purpose they are formed into a separate cadre. As vacancies occur among these officers, the posts will be transferred to class I of the Madras Educational Service. The posts which were originally included in the Indian Educational Service cadre but which are now permanently vacant have been included in class I with the exception of the following :—

(1) Four technical posts for which special recruitment on special rates of pay has to be made, have been removed from the regular cadre.

(2) Three posts under other administrations and departments for which officers were originally recruited from the Madras cadre of the Indian Educational Service and for which the administrations and departments concerned have now agreed to make their own arrangements have been omitted.

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(3) Six posts which were originally included in the Indian Educational Service cadre have been relegated to class II as in the opinion of the Government they are not of sufficient importance to be included in class I.

There are at present 26 posts of District Educational Officers, 12 in the Indian Educational Service and 14 in the Madras Educational Service. It has been considered desirable to fix the number of District Educational Officers in the higher service (Indian Educational Service and class I) at 14 and reduce the number in the Madras Educational Service (class II) by two.

(*b*) No.

(*c*) The posts of Professor of Economics and the Professor of Sanskrit in the Presidency College have been retained in the Indian Educational Service cadre as they are permanently held by officers appointed to this service, while the posts of additional Professor of English, Professor of Physics, additional Professor of Physics and Professors of Zoology, History, Geology and Philosophy are shown in class I as they are permanently vacant. The first-mentioned two posts will also be transferred to class I when they fall vacant.

Mr. ABDUL HAMEED KHAN :—" May I know from the hon. the Chief Minister, with reference to the answer given to clause (*c*), who has been responsible for this state of affairs ?"

The hon. Dr. P. SUBBARAYAN :—" The reason is already given in the answer. I have nothing further to add."

Mr. G. HARISARVOTTAMA RAO :—" It is stated in answer to clause (*c*) 'The posts of Professor of Economics and the Professor of Sanskrit, etc., etc., have been retained in the Indian Educational Service'. It is also stated here that some posts are permanently vacant and are therefore shown in class I. There are other posts which are left out of consideration in the answer, for instance, the posts of Professors of Chemistry, Applied Mathematics and so on. May I take it that they go automatically into class I."

The hon. Dr. P. SUBBARAYAN :—" I have already answered that where there are Indian Educational Officers occupying particular appointments, those appointments will remain in the Indian Educational Service, and when those officers who are in service now and holding posts which are classed as class I retire, these Indian Educational Service posts will then be put into class I of the Madras Educational Service."

Mr. G. HARISARVOTTAMA RAO :—" So may I take it that all these Professors of Chemistry, Applied Mathematics, etc., are permanent ? "

The hon. Dr. P. SUBBARAYAN :—" I cannot give an answer off hand. As far as I know the Professor of Chemistry is in the Indian Educational Service, so also, Professor of Mathematics."

II

ELECTION OF TWO MEMBERS TO THE SENATE OF THE ANDHRA UNIVERSITY.

The hon. the PRESIDENT :—" I have to announce to the House that as a result of the voting for the election of two members to the Senate of the Andhra University by the non-official members of the Madras Legislative Council resident within the university area, the following members have been declared duly elected :—

(1) M.R.Ry. Diwan Bahadur P. C. Ethirajulu Nayudu Garu.

(2) Mr. V. Ch. John. "

[*Note.*—An asterisk (*) at the commencement of a speech indicates revision by the Member.]

III

MOTIONS ON THE BUDGET—*cont.*

DEMAND XXII—PUBLIC HEALTH AND VITAL STATISTICS—*cont.*

* The hon. Mr. S. MUTHIAH MUDALIYAR :—" Yesterday evening I was referring to rural water-supply. As regards the policy and programme which hon. Members wanted to know, I may say that the policy and programme which we chalked out on behalf of local boards for the last five years were not carried out by them. My hon. Friend Mr. Saldanha referred to three P's, viz., 'policy, programme and perseverance'. During the Lee Commission days we heard of certain other three P's, viz., 'pay, passage and pension'. If Mr. Saldanha had started with the third 'P', viz., 'perseverance' it would have been more valuable to us. If hon. Members will make use of their persuasive eloquence in their own constituencies and persuade members of taluk and district boards to attend to their needs, it will be greatly helpful to us, and there will be the third 'P'.

11-15 a.m. "Then some hon. Members said that the water available in the villages is not good water. The Government do recognize that fact. There are a large number of villages each having four or five tanks. There is no discrimination among the villagers as to what use each tank is to be put. They indiscriminately use the same tank for bathing, drinking water, for washing purposes and for washing the cattle. Water-supply to the villages can be very much improved if tanks can be conserved for particular purposes only. An order was issued by this Government in October or November 1928 calling the attention of local bodies to the desirability of paying attention to this matter of preserving and conserving some tanks for drinking purposes only, some tanks for washing their cattle, some for washing purposes for men and so on. We have no definite information how far this suggestion of the Government has been carried out by local bodies. A good deal of improvement in the matter of water-supply to the people in the villages can be effected if the people are a little more careful; without any expenditure of money, this can easily be done.

" Mr. Muniswami Pillai referred to the deplorable condition of the depressed classes in cheris. The Labour Department has been in charge of these cheris for a fairly long time. Though that department has not been able to do everything for these people, a good deal of improvement has been effected. Provision has been made in the budget during recent years for the improvement of the condition of the depressed classes in cheri areas.

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I trust that hon. Members of this House belonging to the depressed classes will co-operate with the Labour Department and make it possible for Government to do something for the community. I must say that the condition of the cheris has much improved now.

"Another complaint was about the vicinity of burning grounds to the cheris. Unfortunately in certain villages it is so. There is very great difficulty in removing these burning grounds to some other places. Wherever it was possible, it was done in two or three cases. In one or two other cases it was not possible to do so, because there were no other places to which the burning grounds may be removed.

"Some suggestions were made by hon. Members during the course of the debate yesterday; some of them are very much beyond the power of this Government to adopt. As to the suggestion of my hon. Friend, Mr. Koti Reddi, that all houses in his district should be demolished and new ones built, if it can be done on a co-operative basis, and the hon. Member will undertake it, it will be time enough for the Co-operative department and the Public Health Department to help him. Co-operative societies are giving loans for the purpose of house building. There is nothing to prevent the hon. Member from Cuddapah taking advantage of the help of the co-operative socities for building purposes.

"Then reference was made to hookworm diseases. Dr. Kendrick was attending to that work with the assistance of the Rockefeller Institute. That work has been taken over by the Government and they are continuing the work. I am told that this disease is due to insanitary habits of the villagers or even of people in towns. Attempt is being made to preach the evils of this disease. In Madura town, the president of the district board has made great advancement in this matter. This is only an experimental measure. The Government have allotted a sum of Rs. 15,000 or Rs. 25,000—I do not exactly remember the amount—for the purpose of starting experiments in the various districts. When the use of latrines becomes more popular, there will be a fall in the number of persons affected by the hookworm disease. This matter requires the serious attention of people and public workers because, I understand, there are hardly any people who can be said to be free from this disease. Ninety per cent of people are said to be subject to this disease. This disease is due to the fouling of the soil.

"Mr. Dorai Raja said that injection for cholera cases is not successful, and that billi vaccine should be used. This matter was considered by the Government; it is considered to be a preventive treatment. The question how far the administration of this vaccine will be successful and whether it can be continued is a matter which has to be considered after the experiment has been tried for some time. I think the experiment has been tried for one year. This treatment, I may say, is four or five times more costly than giving injections.

"The hon. Member, Mr. Ellappa Chettiyar, referred to the supply of water to Salem town . . ."

The hon. the PRESIDENT:—"I request the hon. Member not to refer to this matter."

The hon. Mr. S. MUTHIAH MUDALIYAR:—"I am referring to rural areas. As I have already said, orders have been issued.

"Mr. Ranganatha Mudaliyar said that a Government Order has been issued to the effect that village officers should not help the propagandists. The only thing that has been done, as far as I know, is that a circular was

issued by the Board of Revenue to the effect that the village officers should not be called upon to assist in this propaganda work. I think there was some complaint from some high Revenue officials that these village officers are neglecting their legitimate work. There is nothing like the Board of Revenue throwing obstacles in the way of the propaganda being carried. The question of issuing a revised circular in this matter is being considered. There are one or two matters which I would like to refer to. But as you said, yesterday, that some hon. Members are very anxious to speak on birth control, I do not wish to take up more time."

The hon. the PRESIDENT :—" The question is to reduce the allotment of Rs. 1,43,800 for Direction by Rs. 100."

The motion was negatived.

The hon. the PRESIDENT :—" I select next motion No. 665 of Mr. Shetty for being moved."

* Mr. A. B. SHETTY :—" Sir, I move—

'*that the allotment of Rs.* 1,43,800 *for Direction be reduced by Rs.* 100'

to raise the question of establishing birth-control clinics.

" Sir, birth-control propaganda is part of the preventive work which the Public Health Department has to do. It is essential in the interests of the health of the mother and of the welfare of children. It is also necessary for preventing over-population which brings in its train so many evils. Colonel Russell, late Director of Public Health, after making a close study of the population figures in Madras city and in the mufassal is said to have come to the conclusion that the population in this City as well as in this Presidency has very nearly reached its maximum limit. Birth-rate in this Presidency has increased from 27 to 37 per mille of the population during the last 7 or 8 years. The Public Health Department by the work it does in the matter of preventing diseases and reducing the death-rate will necessarily bring about an increase in population. An increase in population beyond a certain limit means less food-supply, more overcrowding, more sickness and death, and less chances for a decent life. It works in a vicious circle. So, the real problem in this country or in any country is the question of keeping the population within a certain limit. This was the view which the Surgeon-General Major-General Megaw took in a lecture which he delivered in August or September last. He showed how, in Western countries, it is prudence in the matter of reproduction that has made it possible for people to live like civilized human beings. High birth-rate means high death-rate and high infantile mortality. If we keep down the birth-rate, we can keep down the death-rate. Otherwise Nature will work in its own blind way to bring down excess of population by means of destitution, disease, and pestilence. Excessive child-bearing leads to a number of disorders in women. Pregnancy in quick succession is injurious to the health of the mother and inimical to the interests of children. When the number of children exceeds a certain number, parents of limited means cannot give them the same care and attention as they can bestow on a limited family; they cannot bring them up properly; they cannot educate them properly. In certain conditions of health, pregnancy is positively dangerous to woman as, for instance, when she is suffering from consumption or heart disease or she has a contracted pelvis. There are other circumstances which make parenthood undesirable. One or the other parent may be suffering from some transmissible disease, like syphilis; in that case, to bring forth children will be a regular curse on them.

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"Sir, in Western countries, birth-control is being widely practised to-day. The use of contraceptives has become part of the common practice of all civilized countries. Population is becoming stationary in many countries in the West. In France it has been stationary for a considerable length of time now. In Holland birth-control has been practised for a long time with very good results. In England, both the birth-rate and the death-rate have been falling and the population is becoming stationary. This is the case all over Western Europe. In Europe and America they are carrying on propaganda in various ways, by means of books, journals, lectures, etc. The well-to-do classes, the better class of people are carefully limiting their families; this practice is spreading now even among the uneducated and the ignorant. The idea of birth-control is comparatively new in this country. It is true that in Madras a league called the Neo-Malthusian League has been started and I am glad to see that several distinguished men, men holding high positions in life, have lent their names and given all the weight of their support to this movement. But this movement should not be confined to the educated classes alone. The knowledge of birth-control must spread among the poor classes, the ignorant classes who are economically least capable of bearing the burden of large families, and who, therefore, stand most in need of this information. The other day I read in the papers that one Lady Superintendent, who I believe, is in charge of some welfare centre in Madras asked the Madras Corporation, to permit her to give information about the methods of birth-control to those who come and ask for it. The Corporation after a debate on this matter refused to give her this permission."

* The hon. the PRESIDENT :—"The hon. Member cannot criticise the Madras Corporation by this motion."

* Mr. A. B. SHETTY :—"I am pointing out, Sir, that in this country people have not yet come to realize the need for making information regarding family limitation available to those who seek for it. Our city fathers must be aware of the resolution brought in the House of Lords by Lord Buckmaster in 1926 for removing the ban on the authorities at welfare centres giving information regarding the methods of preventing conception. That resolution was passed by a clear majority even in such a conservative House. For want of proper information, women distracted by an unwanted pregnancy are sometimes driven to quacks for procuring abortion at considerable risk to their health and lives. I think, Sir, that at least in our maternity and child welfare centres, this information must be made available to the poor women who come and ask for it. Further I think the Public Health Department must carry on propaganda and educate public opinion about the necessity for limitation of family. Knowledge of birth-control must, according to so great an authority as H. G. Wells, be made available to every adult in a civilized country.

"Various objections are raised against birth-control on grounds of morality and religion. I have no time to refer to this matter as the time before me is very short. Government may say that in no other country so far the State has taken up this propaganda. But, Sir, Madras is going ahead in many matters. It has taken up anti-drink propaganda which no other Government has done so far. I want the hon. Minister to have this question carefully examined and considered and not to satisfy himself by giving us a ready-made answer."

* The MAHARAJA OF PITHAPURAM :—"Sir, I beg to second the motion 11-30 which has been so ably moved by my hon. Friend Mr. Shetty. Birth- a.m. control is, in my humble opinion, of the utmost importance to our country,

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especially to the poor. The condition of the poor people in this country is very deplorable indeed. Why add to their privations? Their position is still worse in a Presidency where the Chief Minister, himself an Indian, who is expected to protect and promote the interests of the poor, comes forward with a plea that he is not able to find funds for the relief of the poor. Sir, there is a wrong impression in the minds of certain people that birth-control is against our religion. It is nothing of the kind. For instance, it is sanctioned by Brihadaranyaka Upanishad and by several works on Yoga Sastra. There is also a fear in the minds of some people that the methods adopted are injurious to health. But, I beg to submit that it is not so. To prove that, I will quote a few names with your permission, Sir. Those who have taken an interest in this matter are:

1. Lord Buckmaster, Ex-Lord Chancellor of England and now Judge of the Privy Council.
2. Lord Balfour of Burleigh.
3. Earl Russell, Under Secretary of State for India.
4. Earl of Asquith and Oxford.
5. Lord Dawson of Penn, His Majesty's Physician.
6. Sir William Arbuthnot Lane, the greatest Surgeon of England.
7. Hon Bertrand Russell.
8. J. M. Keynes, the greatest Economist of England.
9. Prof. Edward Wester March, Swedish Professor, the greatest authority on marriage.
10. H. G. Wells.
11. G. Bernard Shaw.
12. Bishop Barnes, Bishop of Birmingham.
13. Dean Inge, Dean of Westminster.
14. Viscountess Gray of Falloden.
15. Sir George H. Knibbs.
16. Upton Sinclair.

"Now, Sir, I finally appeal to the hon. the Second Minister in particular and to all the Members of this House to kindly join our league."

* Dr. (Mrs.) S. MUTHULAKSHMI REDDI :—"Mr. President, Sir, I am highly grateful to the two hon. Members of this House for having brought this question before this Council, but I am sorry that I do not entirely agree with both of them in all the views they have expressed. (Hear, hear). Even though birth-control is necessary for certain conditions of health and for certain diseases which are communicable and which the parent should not propagate to the progeny, because it is for the future generation that we should live, not so much for ourselves, I feel that it is rather premature for this country to practise birth-control. What we urgently need is propaganda against infant marriages. There is no meaning in tolerating marriages between the ages of 8 and 12 and at the same time preaching to those children birth-control. How are they to learn and how are they to practise? Instead of birth-control, we ought to teach them self-control (hear, hear). Sir, science and experience have proved that continence is conducive to health and incontinence is productive of diseases. India famed for its eminent philosophy, religion and spirituality should give the above message to the world. Now, in a country where even the educated men and women, B.As. and M.As. do not realize the evils of early marriage, where in Malabar a section of the Brahmans called Nambudris practise poligamy in an acute form, I feel birth-control clinics and birth-control teaching will only produce irresponsibility among people. We want more maternity and child-welfare centres

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to teach the people the sanctity of motherhood and fatherhood. As there is not much time for me, I will only read from the writings of that great spiritual leader, Mahatma Gandhi, who says :

'I think it is the height of ignorance to believe that the sexual act is an independent function necessary like sleeping or eating. The world depends for its existence on the act of generation, and as the world is the play-ground of God, and a reflection of His glory, the act of generation should be controlled for the ordered growth of the world. He who realizes this will control his lust at any cost, will equip himself with the knowledge necessary for the physical, mental and spiritual well-being of the nation and give the benefit of that knowledge to posterity.'

"What we really want is a chain of maternity and child-welfare centres throughout the Presidency and I have also given notice of a cut motion that these centres should be liberally financed by the Government. And, if married women want advice it may be given at those centres. Even in England the Ministry of Health thought it premature to open birth-control clinics where the people are cent per cent literate. Can it be said then that people here are ready for such a teaching ? Of course in their country it is the women that demand it, but here, our men are championing the cause of women for which we are grateful indeed. In my opinion we can wait till we eradicate child marriages and till people become literate and are able to use the knowledge given to them to the benefit not only of themselves but also of the community at large. The Ministry of Health in England to a deputation of women who waited upon that body and to a resolution of Lord Buckmaster replied as follows :

'That maternity and child-welfare centres should deal with expectant mothers and not with the married or unmarried or those contemplating the use of contraceptives; ante-natal centres ought to give advice with regard to birth-control and exceptional cases where evidence of pregnancy seems undesirable on medical grounds should be referred to private medical practitioners or hospitals.'

"I would, therefore, appeal to the high officials that are going about the country preaching birth-control and also to the hon. Members of this House to start a campaign against early marriage. We know many such marriages have taken place recently. Could those boys and girls realize the responsibility of fatherhood and motherhood ?"

* The hon. Mr. S. MUTHIAH MUDALIYAR :—" Sir, after the very interesting discussion raised in this Council, towards the close of the time fixed for this demand, I do not think I can very usefully add to the speeches that have been made from both sides of the House. The hon. Mover Mr. Shetty said if there is less of births, there would be less number of men on this earth and thus there would be less of disease. That is, of course an axiom. This question was raised a few days ago in the Sheffield City Council. I will refer to two views which were expressed on that occasion. Councillor Asbury, speaking on that resolution calling upon the Ministry of Health to provide facilities for giving instruction in contraceptive methods, said that the Sheffield medical officer of health was strongly in favour of facilities being provided by the municipality. He said 'There were women bringing children into the world when they had no right to do so. To say they would not tackle the problem was to pretend that there was no problem to tackle.' This raised the ire of one of the lady councillors by name Mrs. Longdon and she got up and said : 'There was a great cleavage of opinion on the question, especially among medical men. Medical men conversant ith the home life of the individual could do more to help and advise women than could maternity clinics.' Then as regards contraceptive methods, she says 'The

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responsibility should not be one-sided and they had no right to introduce methods which would lead to lack of sobriety and restraint.' It is only these people who want indulgence. As Mahatma Gandhi and the learned Deputy President of our Council have said, you have to restrain yourself and not try these contraceptive methods. That seems to be the view of the medical men. I do not think I can further usefully add to this debate. I hope that after the interesting discussion we have had, it may set people thinking about the matter."

Mr. A. B. SHETTY :—" I beg to withdraw the motion, Sir."

The motion was by leave of the House withdrawn.

The hon. the PRESIDENT :—" I now put the demand to the vote of the House.

" The question is that Government be granted a sum not exceeding Rs. 52,01,000 under Demand XXII—Public Health and Vital Statistics."

The motion was adopted and the grant was made.

DEMAND XXIII—AGRICULTURE.

The hon. Mr. M. R. SETURATNAM AYYAR :—" Sir, on the recommendation of His Excellency the Governor I move—

'*that Government be granted a sum not exceeding Rs.* 19,77,300 *under Demand XXIII—Agriculture*' ".

Mr. R. NAGAN GOWDA :—" Mr. President, Sir, I move—

'*to reduce the allotment of Rs.* 39,500 *for Direction by Rs.* 100.'

" My object in moving this cut motion is, first to discuss the need for increased activities in the Department of Agriculture, and secondly to urge the necessity for its complete Indianization. My object is not to handicap the Minister in developing the department, but on the other hand, as is distinctly stated, it is to enable him to increase the activities of this department very much. In this connexion, I wish to take a few of the more important sections of the department and show how the department has not been progressing as rapidly as expected. Sir, I would take, for instance, the Livestock section first. It is one of the costliest sections in the Department of Agriculture with four different stations all over the Presidency. I think it has been in existence for almost over ten years, but yet I cannot say that it has done very much work. It is far from satisfactory. I do not wish to go into each one of the four different farms, to show how little work is done in each of them, while the amount of expenditure spent on them is enormous. Sir, I would only mention that the number of bulls that are available for breeding purposes are very few indeed and the number of bulls that have been given out on the basis of premia can be counted on one's fingers. In some parts of the Presidency, for instance in the Ceded districts, the department has not been able even to determine which is the breed of cattle that would be most suitable for that area. I remember, some time ago, the answer given to a question put was, that they have not yet surveyed that part of the country at all. Even in the other parts where they have done the work, the number of bulls that they have is very few. It is not only a great handicap for the better breeding of cattle in this country, but it also has been

a great handicap to the economic progress of the agriculturists. It is, I think, known to this Council that the Ongole cattle were exported in large number to other countries of the world. The exportation of those cattle has now been stopped; and I agree that under the then circumstances it was the 11-45 a.m. best thing to do. But in any progressive country the thing that would be done would have been quite different. They would have encouraged export and at the same time they would have encouraged the breeding of cattle of that particular variety for which there is a great deal of demand in the outside world. Sir, the export of bullocks is like exporting of motor cars and or, for the matter of that, ony other article that is generally sold. As all export is profitable business, it ought to be encouraged and, to maintain the stock, breeding of bullocks of that particular variety should be encouraged. This would be of great benefit to the ryots. Instead of this the Government have stopped exportation altogether.

"Again, Sir, though they have spent large sums of money on the breeding of dairy cows yet so far there are very few dairy cows with increased milking capacity.

"The case of the buffalo farm in Guntur is almost a miserable tale. This farm has been in existence for the last seven or eight years; first it was in one place, then it was taken to another place. In the latter place, the buffaloes could not get even sufficient drinking water. In the year for which reports are available the farm has sold only three bulls for breeding purposes, and I think every one will agree with me when I say that that is a very small number indeed for the amount of money invested and for the area to be served. While I am on this subject, I would like to mention that the amount of work that has been done for increasing the supply of fodder and the varieties of grass and the means of preservation of fodder is very scanty indeed. They have done some work in the matter of silos. But I would ask how many of the farmers have taken to silos and use silage as fodder for their cattle.

"Sir, sheep have been known to be bred on Government farms for the last so many years. They first had a sheep farm in Bellary which is the best place for sheep breeding in this Presidency; then they took it to another place and now it is at Hosur. At present they have altogether two to three head of sheep, but very few of them are given out for breeding purposes. These sheep are best reared in Bellary, their native land, so to speak, and the best thing to do would have been to take up a large reserve in that district and breed them in large numbers and distribute them to the rest of the Presidency. Instead of keeping them where they are acclimatized for centuries they are being transported from one place to another.

"For the last two years there has been an epidemic among poultry and they have died in large numbers. The department is doing little work in poultry; not that they do not have poultry—for they have had them for long at Coimbatore. But, they are there evidently to cater to the needs of the few Europeans at Coimbatore. There till recently eggs were sold at the rate of Rs. 5 or 6 per dozen for the purpose of raising chickens, but they were sold at ten to twelve annas for consumption. I may say here that in a country like Denmark they have earned huge sums of money by breeding poultry and exporting them. One must realize that poultry forms one of the

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important items of the diet of the agriculturist, and that it is an important source of income, and now that the department has started that industry I would remind them that there is considerable work to be done in that line and that too quickly.

" I wish to mention also in passing that in the Punjab in the experiment of rural construction work they were able to place as many as 700 heads of breeding bulls in one district; and every one will admit that it is a large number, though it may or may not be sufficient for the district as a whole. In a district like Bellary which has about 900 villages, one breeding bull for each village is none too much. In general I will say that when we compare the enormous expenditure with the results attained in the livestock section we are simply struck by the fact that so little is accomplished.

" Here I would like to state that there is no attempt made to carry on bee-hiving as an industry. I will state for the information of the Government that it is in other countries an important subsidiary occupation of the farmer.

" Then, Sir, among the most important crops that are raised in this Presidency sugarcane is one. I notice in the report of the Government the statement that they have introduced new varieties of cane, and they also state in paragraph 74 of the report for the year 1927–28 that new methods of sugarcane growing have been successfully shown to the farmers in Hospet. I submit, Sir, this is something new to me though I belong to that part of the Presidency. I have been taking some interest in agriculture, and I do not know whether any ryot has taken to that form of growing sugarcane. Sir, in my own district unless it is shown that a new method is economical and profitable no ryot will adopt it. Then, Sir, so far as the new methods of cane growing and new varieties of cane are concerned no ryot in Hospet has come forward to rear the new varieties or take to new methods for the simple reason that they have never proved profitable. I would say to the Agricultural department that they should start work on raising better varieties and devising new methods of cane growing in as much as sugarcane forms one big money crop of our province. With regard to the better way of making jaggery the department is an utter failure. I myself once placed 5 acres of cane at the disposal of this department to show better method of making jaggery but I had to withdraw it as the department did not show a better method of making jaggery. I have almost challenged the department to take up about 10 acres in the Tungabhadra channel valley and show better varieties and better methods of growing sugarcane and prove that it is commercially a successful thing. They have yet to take up the challenge.

" Next to sugarcane the important crops are millets. Since 1923 the millet farm has been in existence and nothing tangible has been done till now. In the first place, Coimbatore is a wrong place to grow millets for Ceded districts; because the climatic conditions in Coimbatore are entirely different from those prevailing in the Ceded districts. The work that is done with white cholam is yet incomplete. Again the work on yellow cholam and ragi is yet incomplete. I know the Government is going to start new millet stations this year at Adoni, Nandyal and Hagari; but who is to man these stations? Is it the men from the farm at Coimbatore who for the last so many years have not been able to produce any valuable thing? There are several Indian young men trained in foreign countries in plant breeding who are available for this and I would ask Government to secure their services.

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"Sir, sometimes I feel like saying that the Government keeps some departments as mere pinjrapoles. (Laughter.) I am sure in this country we have much more facilities for producing fruits than in any other country in the world. For, this is tropics and we have many facilities to produce enough fruits both for consumption and for export. Still you will find that there are considerable varieties of fruits imported into this country. As an illustration thereof I may say that we are getting oranges from South Africa. What is the department doing to raise fruits? At present we have a fruit farm in the Nilgris where only apples, peaches, prunes and so on are grown. But the peculiar climate of that place is limited to a very small area of the Presidency and therefore the results obtained there will not help the other parts. Hence why should not we grow fruits that are commonly grown all over the Presidency such as mango, orange and a host of others?

"There is one more subject I want to touch upon and that is agricultural engineering. Sir, people repeatedly ask agriculturists whether agriculture pays? Agriculture indeed pays. It does not pay the same sum that industries, Government service and other professions pay. In the United States they are using machinery in agriculture all round and it is made to pay as well as any other industry. Now the work turned out by the Agriculture Engineer in this department is little or nothing. In the report for 1927–28 we find the statement of the Director 'I am happy to say that a whole-time Research Engineer has been appointed to take up this work' but we find that an Agriculture Engineer by name Mr. Dunnhill is in the service ever since 1924, and he is put to look after the roads of the estates, a duty which could be discharged very well by any ordinary Civil Engineer for a less sum.

"On the question of district work, this House has always asked for an increase in the number of demonstrators—one for each taluk, but I notice that this year they have reduced the number of demonstrators by 2. While it was 174 before, it is now 172. 12 noon

"These are some of the main lines on which the Agricultural department could increase its activities. I do not want to say more on that.

"I should like to say a few words in support of the second point in the motion I have made, that is, the necessity for Indianization in this Service. Before saying anything on this matter I want to congratulate the department on the recent Government Order that they have issued placing the entire Agricultural Service on a Madras Service basis. It was long overdue in this Presidency and now this department has taken a lead and has set an example to the rest of the departments under this Government, which I hope they will follow. In so far as they have done this in this department the Government deserve congratulations from this House. This Government Order will certainly lead to complete Indianization of the department. Even before this it was the intention of the Government to have almost all the sections manned by Indians. For instance, Sir, in the Livestocks section when they appointed an American for a period of five years it was on the special condition that he should train Indians to take his place when he left the service. He was appointed on that condition in 1926 and he left the service in 1929 without training anybody. The same thing is happening, I think, in the Paddy Breeding section. The man that was appointed in 1925 by the Government on a five years' contract is due to retire by about November; I do not know whether during these five years he has trained anybody. I should like to

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have an assurance from the Government that there is an Indian or a number of Indians trained for the work who will be able to take his place when he goes away. The Agricultural Engineer who was appointed two years ago was also appointed on the condition that by the time his contract of five years expired he should have Indians trained to take his place. But so far as my information goes, he has not been training anybody at all. Indeed, two years ago, a student was sent from this country by this Government to England in order to study Agricultural Engineering. He has now come back and for the last six months he has been looking for a job in the Agricultural Engineering department under this Government. I do not see why he has not been appointed yet.

"I for one do not find any reason, in the appointments that are to be made hereafter, why there should be any need for importing Europeans for the work that can be best done by Indians. Indians know more about the Indian agricultural conditions than the Europeans. When these Europeans are appointed on a five years' contract, they spend the first two or three years in learning the conditions and then by the time they are able to take up the work their term is almost over."

* Diwan Bahadur R. N. AROGYASWAMI MUDALIYAR :—" Mr. President, I have much pleasure in seconding the motion of my hon. Friend Mr. Nagan Gowda. I gave notice of a motion with a view to discussing the recommendations of the Royal Agricultural Commission. The recommendations of the Commission cover not only the Agricultural department but a number of other departments, for instance, the Irrigation department, the Forest department, the Veterinary department, the Co-operative department, the Public Health department and so forth. But I suppose, Sir, I would not be in order, when speaking on this demand, to discuss the Commission's recommendations with reference to the other departments and I suppose I will be in order in referring only to the Agricultural department. The recommendations of the Royal Commission have been made with the main idea that agriculture should be made profitable. I think those who have studied the economics of agriculture will admit that in many districts and in many localities agriculture has reached a stage when it has ceased to be profitable. That being the case, the main problem that ought to occupy the attention of the Agricultural department is that of making agriculture pay. That can only be done by increasing the yield from agriculture and diminishing the expenditure thereon. To begin with, Sir, one would be surprised that in the case of a department which is concerned with the welfare of the bulk of the population that pays possibly 80 per cent of the taxes of the Presidency we should have to be content with the paltry expenditure of Rs. 19 lakhs, whereas a department like the Police spends two crores, Education about $2\frac{1}{2}$ crores and so on. I think, Sir, last year I made a statement that the country expects that for securing the welfare of the agriculturists, the first necessary step is to secure a more equitable distribution of the revenues of the country to be spent on the various departments. I think the House will agree that the expenditure of 19 lakhs is almost a scandal when, as I said, about 80 per cent—about 13 out of the 18 crores of the revenue is derived from the agricultural classes partly in the shape of land revenue and partly in the shape of excise revenue which also comes from these classes.

" Sir, the first thing that I should expect is an expansion of the activities of the Agricultural department firstly in the direction of increasing the

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outturn and secondly in the direction of reducing the expenditure on agriculture. It is well known that in other countries the crop outturn is many times higher than the outturn reached in this country even on the very best lands. Take the case of Japan. A lot of land there produces about three times the quantity that is produced on an average on a similar plot in this country. The question is how we are going to secure this increased outturn. In certain parts the ryot has got to contend not merely with other difficulties but also with the difficulty of insufficient water-supply. I take it, Sir, that the Agricultural department in those tracts ought to be as much concerned with the question of adequacy of the water-supply as the Irrigation department or the Revenue Department which collects the revenue. As a matter of fact, it would surprise the hon. Members of this House if I say that even in the deltas of the Godavari and Kistna the irrigation supplies are far from satisfactory. The House will remember that the Finance Member stated in his budget speech that he was surprised that the Economic Enquiry Committee recommended that resettlement should be stopped for the present in such rich tracts as the Kistna and Godavari Deltas. The prosperity of these tracts is only a fiction as hon. Members will see when they get the report of the Economic Enquiry Committee. If the Finance Member had only gone into the question of the irrigation supplies in those tracts, he would not have been surprised at the recommendation made by the Economic Enquiry Committee. If the ryots are put to loss in the rich tracts of Kistna and Godavari deltas what will be the condition in places where irrigation is much more precarious? The resulting outturn must be more unsatisfactory. The point is this that the ryot now has got to contend with many difficulties even in the so-called rich areas where there is deltaic irrigation. The necessary remedial works have not been carried out. The question of drainage improvement has been considered only to be dropped. What has been done is a trifle compared with what has still got to be done if the ryot is to be saved from the enormous loss he is put to.

"Apart from the question of irrigation supply, there are many other considerations that ought to occupy the attention of the Agricultural department which will help in securing a larger outturn of crops. There is the question of manures. The Government in the Settlement Department considers that the manure that is produced by the ryots' cattle is sufficient. Hon. Members when they get the report of the Committee will see that the manure which is at present available is inadequate and does not come even to one-fifth of the needs. It is a significant fact which the House will note that even in such so-called rich areas like Kistna and Godavari where the number of cattle maintained is large, the supply is totally inadequate. It is not surprising that the resultant crop is in many cases of a disappointing kind. Then, Sir, with reference to dry crops the conditions in many areas are entirely precarious. If in the so-called rich areas the ryots are not able to maintain a large number of cattle, how can we imagine that the poor ryot in the non-deltaic areas who is entirely depending on rainfall will be able to find the requisite manure to produce a crop outturn that will at all lead to prosperity?

"There are also many other questions which ought to occupy the attention of the Agricultural department.

"It is thought that recourse must be had to artificial manure. The ryots hemselves feel it. But they are groping in the dark. There are large 12-15 p.m.

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foreign companies who have started dumping artificial manure on the country. The ryots are ignorant and believe in the words of the demonstrators and go in for these artificial manures, the result often being disastrous. The Agricultural department itself has done very little in this direction. In fact, it is not in a position to give any advice to the ryot in this matter. As far as the Circars are concerned, they have started the demonstration of the use of artificial manure and have also started an experimental paddy farm at Mareteru, but I think it would be some years before they are in a position to supply information of real value to the ryot. But apart from this, there is some demonstration going on. Demonstrators no doubt are using these artificial manures in many places. But I think the Government would accept my statement that the result achieved by these demonstrations could not be of any real value or longstanding for the simple reason that they cannot possibly command the confidence of the ryots for there is absolutely no superior supervision over the work of these men. They go about the country, get hold of some ryots and get them to agree to give their fields for the purposes of the so-called demonstration work and then they begin making calculations as to the outturn if a particular manure was used and so forth. Some of the demonstrations may result in some good; but they cannot depend with any degree of confidence on the results of their work unless these results are checked by the superior staff which can give out the results with authority to the country. Unless this is done, demonstration work should be considered a waste. Of course, for the employment of superior staff in the directions above mentioned, it is necessary that the Agricultural department should be strengthened. I do not know whether the scheme brought in last year is still in force, but I see that no further strengthening of the department is budgeted for.

"There are various lines of work that are necessary among which I may mention the question of seed distribution. The production of a large yield depends upon the supply to the ryots of better seeds. There is certainly at present a very large demand for good seeds produced by the Agricultural department. But the work of seed production and distribution must be largely extended if the problem of increasing the outturn is to be tackled with. Not only should the Agricultural Department undertake the production and distribution of seeds but should also see to the production and supply of seeds through private agencies under its supervision. This is a matter which the Economic Enquiry Committee thought to be one of very great importance.

"Apart from this, the question of economics of agriculture must also receive the attention of the Agricultural department. There is one important matter which I shall refer to. I shall not detain the house long. It is the question of the maintenance of cattle. The Royal Commission on Agriculture after a very exhaustive examination of the conditions came to the conclusion that on account of general deterioration in the quality of cattle the ryot is now forced unnecessarily to keep on a large number of cattle. The cattle being inefficient, in order to get through his work, the ryot has to maintain a larger number of them than he would have to had they been efficient. As hon. Members of this House are aware, the agricultural season in which these cattle have full work is only for two or three months; and for getting through the work for this short period a large number of cattle has to be maintained by the ryot throughout the year. Of

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course during the off season, the ryot uses the bullocks for carting, etc , as far as possible. If the economic side of agriculture is to be improved, the question of cattle should be considered and the general quality of the stock improved. The evils attendant on the maintenance of a large number of cattle are many. First of all, fodder has to be provided for them. I do not know if it is known in this House, but the Economic Inquiry Committee found out the simple fact, that even in the rich deltaic area the quantity of fodder produced is not sufficient for even one-tenth of the cattle in spite of the fact that half the number of the cattle is sent to the uplands for grazing. Sir, it is known to this House that in the calculation of the income of the ryot, straw is left out of account and on the expenditure side the cost of maintaining the cattle. The thing is that not only has the ryot to maintain a number over and above what he would have to do if they were efficient but also he has to incur enormous losses on account of cattle mortality. I think I shall have occasion to speak on cattle mortality when the veterinary grant comes for discussion."

*The hon. the PRESIDENT :—" I think the hon. Member is exhausting his right of speech on this as well as the the next demand. I am only watching the interests of other Members."

Diwan Bahadur R. N. AROGYASWAMI MUDALIYAR:—"Sir, I will not exhaust the patience of this House any longer. I should say that the sugarcane crop has been a failure in the deltas. Orange gardens are drying up, and there are many other things which have to be considered by the department. But, as I said, the first thing for the hon. the Minister should do is to see that he gets more money from the Finance Department and, unless he secures that, I do not think he will be able to do very much."

* Mr. B. RAMACHANDRA REDDI :—"Mr. President, Sir, the hon. Members who have preceded me have not only exhausted half the time allotted for this demand but also all the available subjects on which one can speak. I may say at once that I am not going to take so much time and I will confine my remarks to a few subjects which need immediate consideration. I refer first of all to the Chintaladevi farm which has been recently visited by the hon. the Minister for Development. It has been brought before the House what a collossal waste of money is being indulged in in that particular farm. It has been found so far that it has not been useful and for the last ten years nothing new has been done there. They are spending nearly Rs. 32,000 per annum upon the establishment and mere feeding of these bulls. They have not been able to increase the milk yield of the cows nor have they improved the quality of the bulls. There are many things to be said about the selection that has been made in the cattle and also the present state of affairs existing there. I will confine my remarks to this one thing. It has been found by every member and by every gentleman who visited the place that it has been useless and that it should not be continued. There seems to be objection on the part of the Government on the ground that if the farm is abolished, the buildings would have to lie unoccupied. Of course huge buildings have been constructed which cost about 3 to 4 lakhs (A voice : As is usual) and it is not unusual for the Government to spend large sums of money on brick and mortar. Now, Sir, the Government are in a fix as to how to utilize the buildings that have been once constructed if they decide on the removal of the farm from Chintaladevi. The farm is intended only to improve the breed and increase the milk yield of the cows and to establish

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the reputation and prestige of the Ongole breed. But unfortunately the site selected was unsuitable and the climate was equally so. There is no proper water-supply and the soil cannot grow anything there. I hear, Sir, there is an idea of sending some of these bulls from the Chintaladevi farm to Hagari. I may suggest that in Kistna district there is a village called Prattur where a lanka land 2,000 acres in extent is available and it is not at all occupied. (A voice: No buildings?) There are no buildings, but I hear that arrangements have already been made for acquiring the site for the Agricultural department.

12-30 p.m. "If the Ongole breed of cattle is transferred to that particular locality which is within the Ongole area and breeding is taken up seriously, I think that will be a better enterprise than this show of a cattle farm at Chintaladevi. I think a better place ought to be chosen. It is also said that the buffalo breeding station at Guntur is not progressing well. It is very surprising to hear that casks of water are brought in carts to be poured on these buffaloes. This is an item of expenditure that any non-Government man would not approve of. If there is an idea of shifting the farm instead of abolishing it, I would suggest the transfer of both the farms to Prattur lanka which is 3 or 4 miles from Bezwada which has the advantage of railway communication. I hope, Sir, that some such remedy will be thought of and this serious waste of public money stopped at Chintaladevi.

"As regards the work of the demonstrators, I find that their activities are merely limited to the supply of certain seeds and offer of advice whenever it is asked for. The presence of the demonstrator is not at all felt and people in outlying parts do not know that a department like the Agricultural department does exist. I suggest that the activities of the demonstrators should be increased and that they should not merely be made to depend upon the pay given by the Government by marking time. I would suggest one method by which such a state of things could be improved. I hear that a system is in existence in Mysore where each demonstrator is given a plot of land and some money advance so that he may improve the plot of land handed over to him. The money advanced should be repaid in 20 or 25 years. The duty of the demonstrator is not only to improve lands that are placed in his hands but also to show the latest and better methods of agriculture in the locality in which the demonstration farm is established. Now, Sir, each demonstrator within his service draws as salary Rs. 30,000 and no benefit is derived from that demonstrator. It is much better to give him this opportunity of improving a certain piece of land by the money advanced by the Government and proving himself of great use to the locality in which he is asked to serve. If this suggestion has not got any insuperable difficulties in adopting, I wish the Government would soon think of it. I would like to keep up my promise of being short in my speech and so I resume my seat."

* Rao Bahadur T. A. Ramalinga Chettiyar :—"Mr. Arogyaswami Mudaliyar deplored that while 13 crores of taxation is paid by the ryots only 19 lakhs and odd is provided for the Agricultural department. Well, Sir, the efficiency and well-being of the ryots does not depend on the working of this department alone. It depends very largely on other matters like irrigation which is much more important in many places than the work of the Agricultural department, the financing of agricultural produce and the marketing of the same. These, Sir, to a very large extent decide the economic position of the ryots. Not only that, their efficiency depends

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upon the question of elementary education, public health and other things as well. Taking all these things into consideration we have been deploring that the rural ryots receive very little attention at the hands of the Government and the ryots are shifting more and more to the urban areas. Moreover, there are other demands under which probably these questions affecting the rural population and the question of financing of agriculture and the marketing of agricultural produce will have to be considered. Here we are concerned only with the work of the Agricultural department which is only a very small portion of the work that has to be done by the Government with reference to the rural population. Taking this work, Sir, we are not beginning things from the beginning. India is an old country in which agriculture has been the chief occupation of the people for thousands of years. The present methods of agriculture have relation to the experience obtained by generations of agriculturists and that is in keeping in some respect with the economic position of the ryots and the possibilities of the monsoon, the availability of water and other elements. So, Sir, to think of improving our agriculture as if we are beginning everything new seems to me to be a false idea and a wrong start. I will give one instance of an attempt to find a substitute for the manures people are using for paddy cultivation. For about fifteen years experiments were being conducted and I know the vicissitudes the opinion of the department underwent with reference to that. I know sometimes they said that fish manure was the best. Sometimes they said that artificial manure was the best. They went on like that. They were not wrong because when they made experiments those particular manures were paying. But ultimately they found—I do not know whether we can say ultimately even now—that green manure is the best manure that can be used for paddy cultivation. Well, Sir, after all, the old knowledge has proved to be most efficient. I am only saying this for the purpose of avoiding impatience which most of us are apt to feel. We are anxious that our conditions should improve. We are anxious that the ryots whose profession is not paying is bettered. But, before we ask the ryot to change the methods we have to be sure of the new methods. I may also mention another advice given to improve the condition of our ryots. For ragi cultivation the Agricultural College recommended the use of fish manure and after a few years they found that as uneconomic when used on a large scale and not paying. Here is a matter in which experiments running over a large number of years have shown that though the yield is good at first it is not so in a large area and that there are other questions like soil differences and other things. So, it takes a long time before any definite conclusion can be arrived at. Therefore I would avoid in these matters anything like impatience. I would ask the department to recommend only such of those things as they are absolutely certain about and not ask the ryot to speculate. I am not an apologist of the department. I only want that the ryot should not run into speculations on matters not fully demonstrated. With regard to millets, I was suprised to hear what Mr. Nagan Gowda said, viz., that Coimbatore is not a proper place to try millets."

* The hon. the PRESIDENT :—" The statement of Mr. Nagan Gowda was to the effect that experiments for the Ceded districts at Coimbatore is not good."

* Rao Bahadur T. A. RAMALINGA CHETTIYAR :—" Well, Sir, there are parts of the Ceded districts where they have got black cotton soil and

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foreign companies who have started dumping artificial manure on the country. The ryots are ignorant and believe in the words of the demonstrators and go in for these artificial manures, the result often being disastrous. The Agricultural department itself has done very little in this direction. In fact, it is not in a position to give any advice to the ryot in this matter. As far as the Circars are concerned, they have started the demonstration of the use of artificial manure and have also started an experimental paddy farm at Mareteru, but I think it would be some years before they are in a position to supply information of real value to the ryot. But apart from this, there is some demonstration going on. Demonstrators no doubt are using these artificial manures in many places. But I think the Government would accept my statement that the result achieved by these demonstrations could not be of any real value or longstanding for the simple reason that they cannot possibly command the confidence of the ryots for there is absolutely no superior supervision over the work of these men. They go about the country, get hold of some ryots and get them to agree to give their fields for the purposes of the so-called demonstration work and then they begin making calculations as to the outturn if a particular manure was used and so forth. Some of the demonstrations may result in some good; but they cannot depend with any degree of confidence on the results of their work unless these results are checked by the superior staff which can give out the results with authority to the country. Unless this is done, demonstration work should be considered a waste. Of course, for the employment of superior staff in the directions above mentioned, it is necessary that the Agricultural department should be strengthened. I do not know whether the scheme brought in last year is still in force, but I see that no further strengthening of the department is budgeted for.

"There are various lines of work that are necessary, among which I may mention the question of seed distribution. The production of a large yield depends upon the supply to the ryots of better seeds. There is certainly at present a very large demand for good seeds produced by the Agricultural department. But the work of seed production and distribution must be largely extended if the problem of increasing the outturn is to be tackled with. Not only should the Agricultural Department undertake the production and distribution of seeds but should also see to the production and supply of seeds through private agencies under its supervision. This is a matter which the Economic Enquiry Committee thought to be one of very great importance.

"Apart from this, the question of economics of agriculture must also receive the attention of the Agricultural department. There is one important matter which I shall refer to. I shall not detain the house long. It is the question of the maintenance of cattle. The Royal Commission on Agriculture after a very exhaustive examination of the conditions came to the conclusion that on account of general deterioration in the quality of cattle the ryot is now forced unnecessarily to keep on a large number of cattle. The cattle being inefficient, in order to get through his work, the ryot has to maintain a larger number of them than he would have to had they been efficient. As hon. Members of this House are aware, the agricultural season in which these cattle have full work is only for two or three months; and for getting through the work for this short period a large number of cattle has to be maintained by the ryot throughout the year. Of

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* Mr. G. Lakshmana Reddi :—" Mr. President, while it is conceded that this province is mainly agricultural and the bulk of the revenue is derived from the agriculturist, the contribution that Government makes in regard to agricultural improvement is not commensurate. More agricultural propaganda work should be undertaken in an earnest spirit by the Government. Of course, whatever the result may be, they must show that some kind of propaganda work is undertaken in an earnest spirit in an intensive form. More agricultural demonstrators must be appointed. At present, the number of demonstrators is very small, and most of them are not, I submit, also earnest in their work. They are not going to outlying villages to find out the requirements of the agriculturists. Recently, I think there was some circular issued that the Government would send out some demonstration cars for the purpose of doing agricultural propaganda work. I do not know if they ever did it. At any rate, no car for propaganda work came to my district, the Anantapur district.

" More agricultural farms also must be opened. For instance, in the district of Anantapur, which is a very large district, there is not even one agricultural farm, and if the ryot wants to see any demonstration farm, he has to travel to the Hagari farm far away from his place. So, it is incumbent on the part of the Government to open some farms in our district, or at least one farm, if they cannot open more.

" Another important thing that I would like to press upon the attention of the hon. Minister is the need for these demonstrators attending the meetings of the local bodies. There was, I know, a circular issued some time back by the Government to the effect that these demonstrators should attend the meetings of the local boards. But, I think the circular is more honoured in the breach by these demonstrators than in the observance. At one meeting of the district board these demonstrators in the Anantapur district were present, and I enquired whether they were regularly attending the meetings of the taluk boards, and I was sorry to find that they seldom attended the meetings. As at these meetings of local boards a number of members and ryots from different parts of the district are present, it is better that these demonstrators attend them and then confer with them about their needs and requirements. So I think it would be very valuable if this practice is brought into vogue by the hon. the Minister. He should see that these demonstrators attend the meetings of the local boards, confer with the ryots and see in an earnest spirit what they can do in the matter of their requirements. The hon. Minister should also see that they do not skulk work as they do at present."

* Mr. T. S. Ramaswami Ayyar :—" Mr. President, Sir, I have to describe the Department of Agriculture as a department without imagination. Till now, the excuse given by the Government, when there was not much progress in agriculture in this country, was that there was lack of funds and that the farmer was conservative. Now, Sir, seeing that the present administration is an administration of lapsed grants, lack of funds cannot really be pleaded as an excuse. It has also been recognized now, Sir, that the farmer is not as conservative as the Government once thought him to be. That the

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Government has recognized these two factors is evidenced by a statement in a pamphlet issued by them on 'The Pykara Hydro-Electric Development'. On page 38 of the pamphlet I find the following lines:

'The bogy of cost, the poverty of the farmer, his unprogressive mind and the impossibility of initiating such progressive measures in this country are all mere myths which have, to a great extent, impeded progress in the past, but should not be allowed to do so any longer.'

In the face of this statement, I cannot really find what excuse the Government has for not adopting a progressive method in the agriculture of this province. I should like to know what detailed programme the Government has got. Any number of commissions have made recommendations for improvement of agriculture. The latest and the most important are those of the Royal Commission on Agriculture. I should like to know what effect the Government has given to the various recommendations of the Agricultural Commission. Perhaps they may say that they have given effect to the recommendations regarding new appointments in the department for, I see on page xxviii of the Report on the Administration of the Madras Presidency for the year 1928–1929, these few lines:

'Government have generally approved these proposals and have provided funds in the budget for 1929–30 for giving effect to some of them. The most important of these relate to the posts of an oil seed specialist and a Headquarters Deputy Director, which have been created during the year, the former to develop oil-seed crops and the latter mainly to direct demonstration and propaganda throughout the Presidency.'

On page xxix I find the statement:

'A Personal Assistant to the Principal was appointed in the Agricultural College, Coimbatore . . .'

If making more appointments means progress, then certainly the Development Department has made great progress. But, if it is a question of really giving effect to the constructive proposals of the Royal Commission on Agriculture, I find, Sir, that really no progress has been made. Of course, it may be contended that some research work has been going on. But, what is the use of all such research unless the results of experiments are made available to the farmer? I find that the results of these researches are, as it were, kept secret in the archives of Government offices; either they are safe within the laboratory itself, or they are made to rest on the shelves of the Government Secretariat In answer to one of the questions put the other day by one of the hon. Members, the hon. Minister for Development replied that the results of experiments as regards manure have not been published and made available to the farmer because they contained language which may not be understood by the poor farmer. I beg to state that the hon. Minister is not quite right in thinking that the poor farmer of Madras is so illiterate as that. If only the Government are serious and make the results of experiments available to the farmer, they will really be doing a great service. With regard to the question about results of experiments not being published by the Government, I would like to refer to the answers given by the Director of Agriculture to the Royal Commission on Agriculture when they visited Coimbatore. One of the questions, I think it was question No. 9726, was:

'*Q.*—When did you make the discovery that you could make silage in pits in the first place?'

The answer was:

'About 10 years ago.'

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The next question was:

'What steps did you take thereafter and up till now to popularize it?'

And the answer was:

'We now make silage on all our experimental stations and demonstrate its use there.'

To question No. 9750:

'Q.—Do you know of any typical ryot who is making silage?'

The answer was:

'No.'

This is a typical instance of the attitude which the Government takes in these matters. They go on making experiments for a number of years, and after all the agriculturist is none the wiser for it.

"Then again, on the question of making the life of the agriculturist happy, I find, Sir, that the roads in the villages, are as bad as ever, and the farmer has to jog along in his bullock-cart over uneven roads, and in this connexion I am reminded, Sir, of the statement of Sir Stanley Reed that 'in a country of bullock-carts we have got a Rolls Royce administration.' I said, Sir, that the department has no imagination. May I give an illustration to show that the department has not worked with any imagination? We now see in so many places broadcasting stations which send out music, and jazz band. Could not Government construct a broadcasting station and send out messages about the weather conditions and about the state of the market? The poor farmer can certainly be enabled to put up a receiving set at a small cost, so that he may get every day news of the conditions of the weather, when floods can be expected, and how he can sell his produce in the best market. It is a very simple idea, and if only the Development Department had some imagination, they could have adopted it. It may be contended that the farmer may not know how to receive broadcasted messages. By himself he may not know; but he can certainly get the help of the local postmaster and the village teacher. I wish, Sir, that the Development Department tries to wake up and do a little more practical work."

* Mr. K. Krishnan :—" Mr. President, I do not wish to take up the time of the House by telling the hon. Minister what he should do or what he should not do, regarding improvements in agriculture generally. I will confine myself to my district alone, and there is one pressing need which I would bring to the notice of the hon. Minister for Development, and it is this. Coconut is our chief industry, and it is from the income out of it that a very large proportion of the people in Malabar make a living. The price of this article has gone down by half the former price within the last four or five years, and I understand that it is due to the large importation of foreign copra and oil from Ceylon and other places. I am aware I am not an expert, nor do I wish to enter into that field. I would only request the hon. Minister to make an enquiry and see whether it is possible to meet that evil and to cause an increase of the price of coconut if possible, which will bring considerable relief to the people of Malabar in particular. I also wish to point 1 p.m. out to the hon. Minister that agricultural co-operative societies have not been started in our Presidency in large numbers. I hope he will see, being himself in charge of the Co-operative department, that facilities are afforded for starting agricultural co-operative societies for improving the condition of the ryots. This is all that I have to say."

* Rao Sahib R. Srinivasan :—" Mr. President, Sir, it may be the desire of many that the direction of the Agricultural department should be in the

hands of an Indian. Indian cultivators have experience of their own soil and primitive ways of cultivation. But they have not scientific knowledge enough to improve the cultivation to produce the required quantity and quality of crop. Therefore the direction should be by the Europeans.

"The landowners do not send their sons to agricultural colleges with the object of educating them to gain knowledge in agriculture, to improve their lands and cultivation, but to pass examinations and secure jobs under Government. It would be well if a rule is laid down that sons of landowners should not be taken into Government service. The landowning classes who are rich and can afford to spend large sums of money on the education of their sons should confine to their agricultural pursuit. They should not be allowed to compete with sons of poor classes and place them at a disadvantage. This disadvantage could be minimized and the unemployment problem solved if the landowning classes are, as I suggested, denied Government jobs. Since the landowning classes do not care to improve their own produce, foreign articles are sure to find their way into our land.

"In the case of tobacco a prohibitive duty is placed on importation while the local produce of tobacco is left without improvement. To avoid foreign competition the local produce should be improved for the benefit and enjoyment of people in the country.

"*Groundnuts* are produced in large quantity and exported. I think a prohibitory duty should be placed on exportation of this produce in order that the landowners may cultivate cereals, such as ragi, cholam, cumbu and other food-grains in large quantity so that poorer classes may have their food cheaper, and live within their means. The same may be said about *indigo* which takes a very large portion of land to produce a quantity more than the country requires.

"*Poultry farming.*—I wish to say a few words about this. At the Agricultural Exhibition held in Madras a few years back, I saw fowls of all sorts mixed together. Breeds of different kinds were not arranged separately to compete. That was, I understood, arranged by an Indian official in charge. Prizes were given at the end and most of these went to Government agency which exhibited them. In my opinion this is wrong and discouraging to the ryots. Prizes must be given to ryot exhibitors so as to encourage them. In the Nilgiris also I saw prizes were taken away by Government. Certainly the Government exhibits were the best, but the object of holding these exhibitions would be frustrated if the prizes were not given to ryot exhibitors. Government exhibits may be placed for comparison. To introduce poultry farming in this country there should be restrictions. Only one kind of breed should be allowed in a village. There are varieties of birds of the egglaying strain and heavy birds for table. Cheris are well suited for poultry farming. Twenty or thirty good laying fowls can maintain a family of three or four in an Indian village.

"*Livestock.*—The cattle in some of the districts in this province have a miserable appearance and are degenerating to the size of goats. This is partly due to want of proper pasture. Good portions of grazing grounds have been converted to cultivable land. On the one hand the cattle are increasing in number while on the other hand the area of grazing has been diminishing. This deplorable state of affairs may be remedied by the

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Agricultural department. Rules or regulations may be laid down limiting the heads of cattle for grazing in a limited area. Those who keep more than that limit may have them grazed in their own land.

" *Sheep.*—Mutton sold in markets is not good and often unfit for consumption. Young sheep need castration and feeding for some time before they are slaughtered.

" *Wool* in sheep in this province requires improvement. Long wooled rams from Nothern India may be brought down and crossed.

" Skin of our goats is considered the best in the world. This requires special attention. This fetches very high price. In this connexion I may mention that shepherds are utterly neglected. Surely they deserve consideration by the department concerned and facilities given to them to improve their stock.

" *Honey Bees.*—They bring in profit when worked out properly by our farmers There are a few kinds of bees in this province. They are not tamed. Tamed bees may be imported and crossed. Gradually bee farming can then be begun. I do not wish to go into the details of this subject at present.

" *Agricultural labourers.*—I wish to refer to the unfortunate lot of the agricultural labourers. They are treated worse than cattle. If a farmer lost a head of cattle he lost certain sum of money, whereas if he lost his labourer he lost nothing and he can get another easily. Field labourers are assets to the farmers. But the Indian farmer abuses his own assets. I think that a commission should be appointed to enquire into the grievances of these classes. Unfortunately when the Agricultural Commission visited this Presidency the labour classes were not informed nor did the Commission care to inquire into their grievances. We know that the problem of labouring classes is very pressing. Their grievances should be looked into.

" As other hon. Members are anxious to speak I do not want to take up more time of the House."

* Mr. A. Ranganatha Mudaliyar :—" My hon. Friend Mr. Nagan Gowda got . . ."

* The hon. the President :—" I request the hon. Member to leave a margin of 15 minutes to enable the hon. Minister to reply."

* Mr. A. Ranganatha Mudaliyar :—" May I know when the demand will be put to the vote ? "

The hon. the President :—" At 1-40 p.m."

* Mr. A. Ranganatha Mudaliyar :—" Sir, my hon. Friend Mr. Nagan Gowda was stressing the need for increasing the activities of the Department of Agriculture. The increase should not merely be in number but in the usefulness as well of the activities. Sir, these, I think, will depend to a large extent on the character and capacity of the officer engaged, and on the response made by the cultivators. The choice of officers I shall leave to the Government and say something in regard to what may be done to make the cultivators more responsive to the propaganda work of the department. For that purpose, I suggest for the consideration of the Government

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the division of the province into so many sections or areas and the appointment of committees for each area with a provision that the agricultural officers in that area should work in co-operation and consultation with the committee appointed for that area. If a committee is constituted for each district I should think that it would be even better, because, you will have then people with local knowledge and interest to help you and the chance of success attending the trial will be more.

"The results of the Agricultural department should be classified under four heads: (1) proved results of experimental work and work in connexion with them may be conducted on as wide a scale as possible without any apprehension of loss; (2) experimental works the results of which are yet not conclusive. There is next the general routine work to help propaganda as a whole and I may add the fourth, the non-credit work. A system like this as a matter of fact is in vogue in the Bombay Presidency and I think perhaps it will interest hon. Members to know they have divided their province into so many areas. So far as sugarcane is concerned, they are treating it under class A work, about which there is no doubt successful results have been achieved. Under that class they are trying these things, viz., the methods of planting, the reduction of cess, the use of ammonia sulphates in addition to varieties of green manure. They have also made experiments in multiple furnaces and power crushing plants. They bring under the first category power pressure. The first and the second seem to be a promising variety and the results of the trial of manure have not yet been conclusively proved. With regard to cotton, the supply of seed, demonstrations, inter-culture and all these things come under class A. That is the sort of thing that is going on there. Under class C, routine propaganda work, they attend to seed, manure, management of depots, keeping record of cultivation,, etc. Under class D, they try to do several things such as the organizing of co-operative societies, the organizing of irrigation societies, the helping of cultivators to organize power associations and so on and so forth. I think if a scheme of that kind is introduced here Government will know exactly what is needed in the several areas they are concerned with. In this scheme I think they very soon find that they should pay more attention to the red soil. As a matter of fact I know there is a large area in this province which consists of red soil. The attention paid by the Government to owners of red soil and their methods of cultivation is surprisingly little. The Government should also pay more attention as to how they could make cultivation pay in tracts where rains are precarious. My hon. Friends who spoke on this subject were dilating upon the several ways by which water could be found for irrigation purposes. They referred to one of the ways, viz., the digging of wells for irrigation purposes. Government recently conducted a sub-soil survey in particular parts of the province. I do not think they have followed up their survey by other measures that should logically have followed their survey. They might have used that survey to demonstrate how far black cotton soils were capable of irrigation by means of wells. It is not a thing that the ryot knows or can safely take up, without risk of loss, because successful irrigation depends on the quantity of water available, its quality, the kind of crop which might be grown and so on. All these things are matters of experiment for the Government to take up and demonstrate to the people concerned. As regards red soil as I have said they have no experimental stations where they can obtain and prove the results to the people.

1-15 p.m.

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"My hon. friends referred to poultry farming, to fruit cultivation and to the use of manures. I should like to ask the hon. Minister what exactly the Government have done in regard to each of these things. There were, I think, proposals under the consideration of Government in regard to poultry farming that they should train some men in this business and with this view they were also in correspondence with the Government of the United Provinces. As regards fruit cultivation, I think a special officer was appointed to investigate certain tracts of this Province to see how far fruit might successfully be grown there and there was also instruction issued to the Registrar of Co-operative Societies that he should form as many Fruit Growers' Societies as possible. As regards manure one of the difficulties in the way of the ryots using it is the high cost thereof. Some attempts were being made to get railway freight on manures reduced, and the House would probably like to know the results achieved in that direction. These are the matters which I have ventured to refer to in view of what you had already said."

*The hon. Mr. M. R. SETURATNAM AYYAR :—"I thank hon. Members of this House for the valuable suggestions they gave for the working of the Agricultural department and also the sympathy shown with regard to my getting more grants for my department. With regard to the grants made to the Agricultutal department in previous years I may inform hon. Members of this House that since 1920 there has been a considerable increase. The department is going on steadily with the limited supply of men and money. The officers in the department in order to do more work are always trying to get more allotments. What we can reasonably expect from the Finance Department we are getting.

"With regard to livestock section, Mr. Nagan Gowda gave an outline of a scheme for the improvement of the section which is useful. We have already taken some action with regard to the improvement of livestock. There was a breeding station in the Ceded Districts but, on account of dearth of grazing ground and water-supply, it has been shifted to Hosur in the Salem district; with the large area and the necessary facilities at Hosur we hope to be able to have better progress and increase in the improved varieties of cattle in future.

"With regard to Chintaladevi and Guntur buffalo breeding stations I think I can agree with Mr. B. Ramachandra Reddi when he said that the farms were not working satisfactorily. After my inspection recently I am inclined to think that it is much better to remove the station to some other place. He has suggested that the buffalo breeding station at Guntur and also the cattle farm at Chintaladevi might be removed to Prattur in Kistna district I think it is a place situated in the Kistna deltaic area and all facilities with regard to grazing and water are available. I will take up the question and see whether the two farms can be removed to Prattur and I can assure hon. Members that this matter will receive my earnest attention.

"With regard to poultry farming provision has been made for poultry breeding in one of the existing stations.

"With regard to bee-hiving, I will also see what can be done in the matter.

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"With regard to sugarcane in this Presidency, I am rather surprised to find that sugarcane cultivation is not satisfactorily proceeding in this province. I will examine this question and see what could be done in the matter.

"With regard to jaggery, the Cottage Industries Committee has examined the question and has sent in their report. I have not yet examined this report. After it is examined, I will assure hon. Members that if anything could be done in the matter it will certainly be done.

"With regard to millets, Mr. Nagan Gowda said that Coimbatore is not good for a millet station. It is one of the several items which go to make up for the improvement of a station. For a good agricultural station, there must be a library, a laboratory and other facilities. We have provided for another station at Adoni.

"With regard to Agricultural Engineering, Mr. Nagan Gowda said that the man in charge of this work had not done any research work. The only difficulty in these things is that we have no workshop. This year provision has been made for it. I understand that an Indian has been trained and has come back and I shall see what could be done to get him trained under the Research Engineer. The number of demonstrators has been increased this year.

"With regard to agricultural manure about which some Members have spoken, I can say we have already opened a station at Marteru and it is hoped that vast improvement will be effected in the course of some years. We hope to give more satisfactory results in future after more stations are started.

"Mr. Ramalinga Chettiyar said that officers in the Agricultural department ought to be recruited according to the recommendations of the Lee Commission and that the service should be provincialized. I may tell hon. Members that the reorganization of the department does not affect the present incumbents who will get their present scale of pay; it will affect only those who will be recruited hereafter. . . "

K. Abdul Hye Sahib Bahadur :—" We do not hear a single word of the hon. Minister."

* The hon. the President :—" As long as the President hears, it is presumed that every hon. Member in the House hears."

* The hon. Mr. M. R. Seturatnam Ayyar :—" Mr. Lakshmana Reddi said that no propaganda work is done by the department. I may say that the demonstrators go to the ryots and demonstrate to them in their own lands new methods of cultivation. We find that a large number of districts have been benefited by this new method. We have only two motor vans for propaganda work; we are going to have one more very soon. If the present experiment proves successful, we may extend it further.

"It was stated that most of the demonstrators do not get the help of the village officers; we have issued instructions that they should attend the jamabandi camps. A Deputy Director has been specially appointed this year to stimulate propaganda work.

"Mr. Ramaswami Ayyar referred to broadcasting stations in important centres. He said that they were not very successful.

"Mr. Krishnan said that the price of coconuts was very high. I shall certainly make enquiries in the matter.

"I do not want to refer to the other points raised during the debate. I shall certainly have the suggestions made by hon. Members examined by the department and see what could be done in order to make the department more popular. The Government are trying their best to make the work of the department more satisfactory, and helpful to the ryots."

Mr. R. NAGAN GOWDA :—"In view of the assurance given by the hon. Minister, Sir, that he will consider all the suggestions favourably, I withdraw my motion."

The motion was, by leave, withdrawn.

The hon. the PRESIDENT :—"The question is that the Government be granted a sum not exceeding Rs. 19,77,300 under Demand XXIII—Agriculture."

The motion was adopted and the Grant was made.

The Council then adjourned for lunch.

After Lunch (2-30 p.m.).

DEMAND XXIV—CIVIL VETERINARY SERVICES.

* The hon. Mr. M. R. SETURATNAM AYYAR :—"Sir, on the recommendation of His Excellency the Governor, I move—

> '*that Government be granted a sum not exceeding Rs.* 11,60,100 *under Demand XXIV—Civil Veterinary Services*'."

* Mr. A. B. SHETTY :—"Sir I move—

> '*To reduce the allotment of Rs.* 33,300 *for Direction by Rs.* 100.'

"Mr. President, the work of the Veterinary department touches most intimately the interests of agriculture. Cattle are essential for cultivation purposes. The provision made for veterinary aid is not at all adequate for the needs of this province. I do not know how long it will take for the Government to employ veterinary officers sufficient to give us one Veterinary Assistant Surgeon for every 25,000 head of cattle, which is the standard laid down by the Royal Commission on Agriculture. The control of the contagious diseases is the most important problem that confronts the civil veterinary department and rinderpest is the most formidable of these diseases. In most of the western countries, it is said they have either stamped out this great scourge or reduced it to a great extent, but here in this country we find rinderpest raging in an epidemic form in several parts of this Presidency and the number of deaths is increasing year by year. We find from the latest report that it has reached its maximum in the year under report. The Government have, in accordance with the recommendation of the Royal Commission, taken to the serum-simultaneous method of inoculation as the only hopeful means of combating rinderpest and they are spending large sums of money for this purpose, but the work of inoculation is handicapped to a great extent on account of the want of a sufficient supply of serum. Now, we get our supply of serum from the Mukhtesar Institute, which supplies the

demand from the whole of India including Burma, except only Mysore. The Mukhtesar Institute is not able to cope with the demand. Madras being the biggest consumer, the necessity for starting a serum institute has been felt and accepted by the Madras Government. The Government have also drawn up plans and estimates for this purpose, but they are now holding up the scheme and awaiting the result of their correspondence with the Government of India regarding the division of the profits of the Mukhtesar Institute between the Government of India and this province. From the latest report, we find complaints from five of the circle officers about the inadequate supply of serum and also virus, particularly serum. Moreover, during the last one year, at least, it is said that Madras has not been able to get first-class serum from the Mukhtesar Institute. In Mysore, they have got their own serum institute. If we are to have not only an adequate supply of serum but also serum of good quality and at a cheap cost, the Madras Government must establish their own institute for manufacturing serum. I trust the hon. Minister will pay his immediate attention to this matter and see that no time is lost in starting the serum institute which is so necessary for the work of inoculation.

"I wish to urge upon the attention of the hon. Minister the question of the pay and prospects of veterinary subordinates. They have for a long time past been asking for better pay and prospects. Their pay and prospects do not at all compare favourably with those of men in the subordinate ranks of other departments. They have no scope for private practice and the hon. Minister has admitted the justice of their demands. He has also said that Government are considering this matter, but I want to know how long they are going to consider this matter. It was also promised that this matter would be considered in connexion with the proposals for this budget, but it has not been done so. I understand that the subordinates of this department proposed to wait on a deputation on the Minister, but this deputation was not received and I do not know for what reasons. The recent reorganization of the higher services of the department will result, I am told, in a large saving. This saving may very well be utilized for increasing the pay of the veterinary subordinates. I trust the hon. Minister will take up a firm attitude and do justice to these people."

* Mr. C. S. GOVINDARAJA MUDALIYAR :—"Sir, in seconding this motion, I shall turn to my cut motion in order to raise the question of protecting cattle from diseases by means of compulsory inoculation. Sir, the prevalence of rinderpest has done great havoc. For example, taking the case of . . ."

The hon. the PRESIDENT :—"Does the hon. Member propose to have legislation in regard to compulsory inoculation? Compulsory inoculation means legislation."

* Mr. C. S. GOVINDARAJA MUDALIYAR :—"No, Sir, I do not propose to go into that question at all, but I will speak on the motion. At present in this Presidency, rinderpest has been prevalent and cattle are dying and necessary inoculation could not be had, because, I understand that in the Veterinary department enough of serum is not available. To give a concrete example, there is an institution called the Madras Pinjrapole, where more than 800 heads of cattle are being looked after and the other day, they had to requisition about 20 heads of cattle, mainly calves, to be taken from that institution to the veterinary hospital. There, they were kept for some time and after inoculation sent back. The necessary arrangements for housing and feeding

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them is not altogther up to the mark and are not satisfactory. If enough of serum is available, I should have welcomed the inoculation of all the cattle in the institution, so that no possible chance of the prevalence of the infection of the cattle by rinderpest can take place. As was suggested by my hon. Friend, Mr. Shetty, when in Mysore they have got an institute where they successfully manufacture this serum for cattle, we do not see any reason why such an institution could not be had within the Madras Presidency. The Nilgiri hills, Coonoor, for example, can afford sufficient facilities by way of cold climate to keep and manufacture the necessary serum. I would very strongly urge upon Government the immediate necessity for steps being taken for the starting of manufacture of the serum either in Coimbatore or in the Nilgiris, so that it may be applied to the cattle immediately and effectively and thus the agriculturists may be benefited. 2-45 p.m.

"I may also state that the present pay and prospects of the officers in the veterinary department are not so high as to attract a sufficiently large number of candidates. By improving their condition we will be solving the problem of unemployment and also increasing the number of assistants in the service. At present there are very few private veterinary practitioners in the country, and I need not say that at present all the graduates sent out of the college are absorbed in the Government service and consequently there are very few of them in the country who can be easily approached by the ryots. Considering the number of cattle owned by the people one should certainly be struck with the necessity for a sufficient number of veterinary officers in the province. But as it is what do we find? There is only one officer, and that in important towns only, and the calls on his service are so large in number that he cannot find time to attend to all the cases. For these reasons, I would ask the Minister first to see to the manufacture of serum in this Presidency itself so that we need not depend on others, and secondly to increase the pay and prospects of the officers of the veterinary service so that more and more men may be attracted and relieve the great demand for the services of those officers that at present exists, and thus finally we may eradicate rinderpest altogether from this province."

Mr. V. I. MUNISWAMI PILLAI :—"Mr. President, Sir, I rise to support the motion of the hon. Mover, Mr. Shetty. I myself have given notice of a similar motion to point out to Government that the number of veterinary officers now existing in the service is not adequate and thereby the ryots are put to various sorts of inconvenience. Sir, due to the constant outbreak of rinderpest both in the urban and rural parts of the districts, a large number of ryots have to go without cattle. Sir, it is a well-known fact that in an Indian home it is highly necessary that you must have a cow. Now after the constant outbreak of rinderpest, I know most of the people have not this species of cattle, and as a result they not only do not get manure for agricultural purposes but also they do not get even the ordinary cow-dung for their household purposes. Sir, in the course of the general debate on the budget, the hon. the Minister told us that very soon attempts would be made to establish a depot for the opening of an institute for the manufacture and preservation of serum in Coonoor. I would seriously request Government not to delay this matter any longer. For, recently there was an outbreak of rinderpest on the borders of Coimbatore, and as a result of it many cattle died. Jackals feasted upon their bodies and turned rabid, and they in turn bit the dogs, which as a result of that turned rabid also, and they in their

[Mr. V. I. Muniswami Pillai] [27th March 1930

turn began to bite men. This menace grew so intense that Government sanctioned a sum of five hundred rupees for the destruction of these jackals. So unless Government take proper preventive measures to avert such a thing they will have again to spend money on uncalled-for and unforeseen things, like this; and waste much money in taking patients to the Pasteur Institute and curing them. I would also say that at present there are not enough number of veterinary assistants to cope with the problem in the province, so that immediate and prompt measures ought be taken to prevent the spread of the disease.

"Again such a thing is essential not in the interests of the cattle alone, but also in the interests of the children who have to depend on them for their milk. For, if we have diseased cattle all over the province, how can we expect to have healthy children? So the time is come when Government should see that a proper veterinary service is kept all over the province for the welfare of humanity as well as of the cattle."

* The RAJA OF KALLIKOTA :—"Mr. President, Sir, I rise to support this motion. I have given notice of a similar cut motion to discuss the question of better pay and prospects of veterinary assistants and also to point out the need for more veterinary dispensaries. I therefore wish to take this opportunity to say a few words about the lot of these Veterinary Graduates.

"The Civil Veterinary Service is a young and small department of the Government and is perhaps the lowest paid of all departments. Time and again this legitimate grievance of the Veterinary department has been brought to the notice of the present Ministry and also the previous Ministry in the form of interpellations and token cuts but I am sorry to observe that the Ministry seems to be heartless to persons whose misfortune it is to serve in the department and who are doing such useful work in treating the dumb creatures. On the 18th of this month, to questions Nos. 1585 and 1585-A, my hon. Friend the Minister for Development replied that the question to improve the pay and prospects of veterinary assistant surgeons was under consideration in connexion with this budget. I think to a supplementary question my hon. Friend gave us to understand that other things might be considered, but not the question of pay, which he feared could not be taken up on the ground that other departments of Government would want increase in their salaries. I wish to point out to this hon. House that this department need not be compared with other departments which are well paid. The veterinary assistants have a genuine, legitimate and long standing grievance to put forward. I understand they wanted to meet the Government on a deputation and they were informed that they need not do so as the matter was under consideration. May I ask for how much longer this is to be considered and are they to be given no better prospects in their service? Their training is as costly and valuable as that of the medical sub-assistant surgeons and I wish to impress on the hon. the Minister that their scale should be raised from Rs. 60 to Rs. 120, to the same level as the sub-assistant Surgeons, i.e., Rs. 75 to Rs. 150. The sub-assistant surgeon has some prospects of gaining some private practice, but this cannot be expected of the Veterinary Graduate. No ryot will voluntarily pay anything for the treatment of his cattle unless it is a compulsory fee to Government for the cost of any medicine or serum. I trust the hon. Minister will reconsider the position.

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"There are not enough dispensaries or touring assistants to give immediate relief at the time of outbreak of epidemics etc. This method of treatment of cattle and other animals is gradually getting popular and is appealing to the country folk but unfortunately they do not have enough facilities to take full advantage of the treatment. I see from the budget that the present number of veterinary assistants is 107 and this is proposed to be raised to 114, an increase of only 7. This is too miserable a number to cope with the needs of the Presidency. I understand the Veterinary College is turning out about 20 graduates every year; why not give them posts in the Government instead of allowing them to drift for themselves? There are not enough men even on reserve to fill up leave and other vacancies. We have failed so far with the previous Ministry. I hope the present Minister before he lays down his office will do something much more substantial to this department. I have said this is a small department of the Government. Don't choke it, view it more liberally, give its subordinates better pay and prospects and I am sure it will prosper."

SWAMI A. S. SAHAJANANDAM :—"மிருக வைத்தியம்.—இந்தியாவிலுள்ள தொழில்களில் மிகவும் முக்கியமான மூலாதாரத்தொழில் விவசாயமே. அதற்கு உற்றதுணையாவது உழவுமாடே. உழவுமாடுகள் நன்றாயிராவிட்டால் குடிகள்முதல் அரசாங்கம்வரை யாதும் நிலைபெறாது. ஆகவே உழவுமாட்டினது நிலைமையிலேயே அனைத்தும் நிலைபெற்றுள்ளன. இதனால் தான் இந்துமதத்தில் சிவன் மாட்டின்மீதிருக்கிறான் என்று சொல்லப்படுகிறது. உபநிஷத்துக்களெல்லாம் பசுக்களை தனமெனக் கொண்டாடுகின்றன. தற்போது நாட்டில் மாடுகளுக்குப் போதுமான பாதுகாப்பில்லை. உதாரணமாக தென்னார்க்காடு ஜில்லாவில் தலைநகராகிய கடலூரில் மிருகவைத்தியசாலை இருக்கிறது. சிதம்பரம் திருமுஷ்ணம் முதலானவிடங்களில் மாடுகளுக்கு நோய்வந்தால் கடலூருக்குக் கொண்டுபோக வேண்டும். சுமார் 30 மைல் 40 மைல்கள் கொண்டு போகவேண்டும். நோய் வந்த மாடுகளை அவ்வளவு தூரம் கொண்டு போகமுடியுமா? இவ்வருஷம் சிதம்பரம் தாலூக்காவில் மாத்திரம் சுமார் எழுபதினாயிரம் மாடுகளிறந்தன. அதனால் சிலர் விசனம்பிடித்திறந்தனர். ஏழைகள் ஒரு ஏர் இரண்டேர் மாடுகள் வைத்திருப்பவர்கள் அவற்றை இழந்தால் என்ன கஷ்டப்படுவார்களென்பதைச் சொல்லவும் வேண்டுமா? ஆகவே எங்கெங்கு மக்களுக்கு வைத்தியசாலைகளேற்படுத்தியுள்ளார்களோ அங்கங்கும் மிருக வைத்தியசாலைகளேற்படுத்தவேண்டும். 3 p.m.

"இது மிகவும் முக்கியமானது. சிதம்பரம் முக்கியமான விவசாய ஸ்தலமாயிருப்பதால் அங்கு உடனே மிருக வைத்தியசாலை யேற்படுத்த வேண்டும்.

"மாடு மேய்ப்பவர்களும் அவற்றைப் பாதுகாப்பவர்களும் தாழ்த்தப்பட்ட மக்களாதலால் அவர்களுக்கு எலிமெண்டரி பாடசாலைகளிலேயே மிருக வைத்தியமும் கற்றுக்கொடுக்கவேண்டும். இவ்விஷயமாக கனம் அபிவிருத்தியிலாகா மந்திரியவர்கள் கவனிக்கவேண்டுகிறேன்."

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* Rao Sahib R. SRINIVASAN :—" Mr. President, Sir, the Veterinary department is making a serious attempt in the way of curing diseases. Unless they have strict quarantine that cattle should not move from one place to another, all their attempts will be futile because my experience in another country has convinced me that it is only by quarantine that the spread of diseases far and wide can be prevented. It is easy for the department to say that they want more officers. But if an Act is passed prescribing that the village munsif should issue a permit for the movement of cattle from one place to another and if the Revenue Department co-operated in the mater cattle diseases can be eradicated."

* The hon. the PRESIDENT :—" I must point out to Mr. Srinivasan that this is not an occasion to suggest any measure for legislation."

Rao Sahib R. SRINIVASAN :—" I have nothing more to say, Sir."

* Mr. S. ARPUDASWAMI UDAYAR :—" I do not like to repeat the arguments that have been advanced by the previous speakers. There is one thing which is more important than anything else and that is the extension of the activities of the Veterinary department to rural areas. Like the demonstration work that is done in connection with the Agricultural department, there should be a great deal of the demonstration work in connection with the Veterinary department. We should have a number of veterinary assistants travelling to different parts of the rural areas and helping the villagers with their advice. It is all very well to speak of cattle. Sometimes we speak of it in depreciating terms—as being mere skin and bones—and say that such cattle is not worth preserving. But, Sir, has any serious attempt been made to have certain kinds of demonstration blocks in the shape of good pasture grounds for the benefit of these cattle in rural areas? Has any serious attempt been made to send veterinary assistants to different blocks and have some kind of demonstration work there? Sometimes we have animal shows organized at headquarters. Surely, it is very difficult for the villagers to flock in large numbers to the headquarter centres for the purpose of witnessing the animal show and derive any valuable lessons as to fodder and other matters relating to the well-being of the cattle. If the organizers could alternatively choose centres within easy reach of rural areas and have such exhibitions or animal shows there, they would go a long way in improving the cattle in rural areas. Many of my hon. friends spoke of the terrible havoc wrought by rinderpest and the enormous difficulties of taking the cattle 30 or 40 miles from the villages. It is very difficult for the villagers to do this. While they are taking them, the cattle might die on the second, third or the fourth mile. I know in the Tanjore district which is considered to be the granary of South India where one naturally must expect to find the very best kind of cattle and also in the adjoining Trichinopoly district, the cattle mortality was appalling. I know that in spite of the serious attempts made by the village officers and certain enlightened people it was absolutely impossible for any kind of help to reach them. So I request the hon. Minister in charge of this department to seriously consider the desirability of extending the activities of this department in the direction of rural centres. If it has been found possible in the case of the Agricultural department to select certain centres like Lalgudi in the Trichinopoly district or Tirukattupalli in the Tanjore district and other taluks for having such stations whence the demonstrators might go and help the villagers, I think it should be possible for them also to open small veterinary hosiptals in such centres as are

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accessible to large masses of people in rural areas so that when rinderpest breaks out there might be a staff of men ready to give assistance to the people. It is a question of money and the hon. Minister has been probably fighting with the hon. Finance Member to get a large allotment. Probably he failed. Still I hope in the interests of the rural classes, especially the agriculturists to whom the cattle is a natural necessity and to whom the loss of cattle is loss not only of wealth but loss also of the means of carrying on their agricultural operations, the hon. Minister would put up a bold fight and get larger funds and see that the Veterinary department is extended, that more assistants are available, and that more dispensaries are started in places within easy reach of the villagers so that not only in times of the outbreak of rinderpest timely assistance could be rendered, but on other occasions also it might be possible for these assistants to go to the chosen blocks and give demonstrations which might be of real benefit to the people in rural areas. I do not know, Sir, whether members are aware of the fact that with regard to the activities of the Veterinary department even people like myself who reside nearly four or five months in villages have not the slightest idea whether anything is done, whether anybody is ready to give any kind of information to the villagers. I have been travelling about, passing from village to village at the beginning of last year when there was terrible outbreak. People came to me with stories of heavy mortality among cattle and all that I could do was to put interpellations which were answered by the Minister in such a way as to give us the idea that the department itself was not aware of the havoc and that they came to be aware of it only three months after the outbreak and after great loss had been inflicted in very many instances. This would show that there is something defective and that there is need for the extension of the activities of this department. If the activities of this department are to be extended in any particular direction it must be in the direction of reaching the rural areas so that the poor agriculturists to whom cattle is far more important than any other source of wealth may be protected in times of danger and may derive all the benefits in order to make agriculture a paying concern."

Mr. S. SUBRAHMANYA MOOPANAR :—"இக்காருண்ணிய கவர்ன்மென்டாரவர்கள் அனேக இடங்களில் மெடிக்கல் ஆஸ்பத்திரிகளும், மிருக ஆஸ்பத்திரிகளும் வைத்திருக்கிறார்கள்.

"ஒரு மாடானது திடீரெனக் கீழேவிழுந்து தீனி தின்னாமல் இரண்டு மூன்று நாள் மிகுந்த கஷ்டமடைந்ததை உடையவர் மிருக ஆஸ்பத்திரிக்கு கொண்டுபோயினர்.

"அந்த மிருக ஆஸ்பத்திரியில் சுமார் 4 நாள்வரையிலும் நின்றது. மிருக ஆஸ்பத்திரி டாக்டர் தன் கையில் இருந்த உயர்ந்த மருந்துகளை கொடுத்தார். ஷை மாட்டின் சீக்கு சொஸ்தப்படவில்லை.

"மறுபடி மாட்டை உடையவர் வீட்டுக்கு ஓட்டிப்போய்விட்டார். மறுநாள் நாட்டுப்புரத்திலிருந்து ஒரு எழை மனிதன் வந்து சீக்குள்ள மாட்டைப் பார்த்தார். அரை அணா கொடுமென்று மாட்டின் சொந்தக்காரரைக் கேட்டார். உடையவர் உடனே கொடுத்தார். நாட்டுப்புரத்தார் வாங்கிக்கொண்டு போய் அரை அணாவுக்கு எருமை மோரும அவரைத் தழையையும் கொண்டு வந்தார்.

[Mr. S. Subrahmanya Moopanar] [27th March 1930

" கொண்டுவந்த தழையை இடித்து எருமை மோரில் கொடுத்தார். அன்றே தீனி தின்ன ஆரம்பித்துவிட்டது. இதுவையும் இன்னும் அனேக விஷயங்களையும் யோசிக்கும்பட்சத்தில் அனேக மகத்துவங்கள் தமிழ் நாட்டின் மருந்துக்கு உண்டென்று நான் வெகு உறுதியாய்ச் சொல்லுவேன்.

" இதற்கு ஓர் உதாரணமுண்டு. தாயுமானவர் சொல்லியிருக்கின்றார். அதை கவனியுங்கள். அதாவது—

கந்துகமதக்கரியை வசமாய்நடத்தலாம்
காடிவெம்புலிவாயையும் கட்டலாம்
ஒருசிங்கமுதுகின்மேற் கொள்ளலாம்
கட்செவி எடுத்தாட்டலாம்
வெந்தணலில் விரதம்வைத் தைந்துலோகத்தையும்
வேதித்துவிற் றுண்ணலாம்
வேறொருவர்காணாமல் உலகத்துலாவலாம்
விண்ணவரை ஏவல்கொள்ளலாம்
சந்ததமும் இளமையோடிருக்கலாம்
மற்றொருசரீரத்தினும்புகுதலாம்
ஜலமேல்நடக்கலாம் அனல்மேலிருக்கலாம்
தன்னிகரில் சித்திபெறலாம்
சிந்தையை அடக்கியே சும்மாவிருக்கின்ற
திடமரிது சற்றாகிஎன்
சிற்றமிசை குடிகொண்ட அறிவான தெய்வமே
தேஜோமயானந்தமே.

" தமிழ் சாஸ்திர யுக்தத்தினாலே இப்பேற்கொற்ற நடவடிக்கையெல்லாம் நடத்தலாம். அனேகர் நடத்தி வருகின்றார்கள்.

" இப்பேற்கொற்றவர்களை காணுவது யெப்படியென்றால் ?

கைவல்லியம்.

சந்தேகந் தெளிதற் படலம்.

வேடமாரிய பேர்களை அரியவே
வேண்டி நான்மகளே கேள்
கூடமாமவர் சுபாவங் சீலங்கள்
குறிகளாய்ந் தரியாமல்
ஓடியுங் குதித்து தலைகீழ் நின்று
உயர்ந்த கம்பத்தேரி
ஆடியும் பல கன்மங்கள் செய்யினும்
அவருண்மை தெரியாதே.

இதற்கு ஓர் சிரிய உதாரணம்.

"ஐயா, நான் நீண்டகாலமாய் ஒரு வைத்தியரிடம் வைத்தியத்தை கற்றுக்கொள்வதற்கு அவர் சொற்படி நடந்துவந்தேன். ஒரு தினத்தில் சில மருந்துகளை கல்வத்திலிட்டு அரைக்கும்படி சொன்னார். அப்படியே அரைத்தேன். பிறகு மாத்திரையாக உருட்டி நிழலில் உலர்த்தும்படி

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கட்டளையிட்டார் ; அப்படியே செய்தேன் ; பிறகு சீசாவில் அடைத்து பீரோவில் வைக்கும்படி உத்திரவிட்டார் ; அப்படியே செய்தேன் ; பிறகு கல்வத்திலிருக்கும் மருந்து கைக்கு வரமுடியவில்லை. வெளியில் என்ன நிற்கிறதென்று கேட்டார் ; கழுதை நிற்கிறதாகச் சொன்னேன் ; அருகம் புல் கொண்டுவாவென்றார் கொண்டுவந்தேன் கல்வத்தில் இருக்கும் மருந்தை புல்லால் தொடை யென்றார் ; தொடைத்தேன் ; கழுதையிடம் போடென்றார் ; போட்டேன் கழுதை மூன்றுநாள் வரையிலும் அவ்விடமே நின்றுக்கொண்டிருந்தது. நாலாவது நாள் பூவரசுமரத்திலுள்ள புல்லு குவித்தலையைக் கொண்டுவாவென்றார். கொண்டுவந்தேன் ; தண்ணீர்விட்டரை யென்றார் ; அரைத்தேன் ; ஒரு சொம்பு ஜலத்தில் கரைத்து பிரணவ மந்திரத்தை எழுதென்றார் ; எழுதினேன் ; ஜலத்தை யெடுத்து கழுதையின் சிரசில் ஊத்தென்றார் ; ஊத்தினேன் ; கழுதை கத்திக் கொண்டே ஓடிப்போய்விட்டது. ஆனதால் இப்பேற்கொற்ற மகத்துவங்கள் தமிழ்நாட்டின் மருந்திலிருப்பதால் அந்தந்த ஜில்லாக்களுக்கு ஒவ்வொரு தமிழ் வைத்தியசாலை யேற்படுத்தும்படி இக்காருண்ய கவர்ண்மெண்டாரவர்களை ரொம்பவுங் கேட்டுக்கொள்ளுகிறேன்."

Mr. G. Lakshmana Reddi :—" Sir, I rise to urge on the Government the need for establishing a serum and vaccine institute in our Presidency. At present, we are getting serum from the far off United Provinces. There is some delay and much expense in getting the serum from there. So it is very necessary that we should have a serum and vaccine institute in our Presidency.

" In 1927–28 the Anantapur district had a number of deaths owing to the 3-15
prevalence of rinderpest. The figures were very high, and I think I am not p.m.
guilty of exaggeration when I say that the toll claimed that year by rinderpest in that district was the heaviest in the Presidency. In 1928–29 also the figures were very high ; but all the same, I do not think the Government have taken any effective steps whatever to prevent the spread of this fell disease. Last year, i.e., 1929–30 also the toll was very great because the disease had assumed a very virulent shape, and nothing which the non-officials were able to do was of any avail for want of sufficient number of veterinary officers. The veterinary staff is very much undermanned. There is, I think, only one Veterinary Assistant for every two taluks, and in some cases for even three taluks. At least when the disease is virulent, the Government should appoint more staff. Government, so far as my district of Anantapur is concerned, have not done any such thing although the toll was very appalling for the last two or three years. So, I think, there is a need for increasing the staff of the Veterinary Assistants. The number of Veterinary hospitals and dispensaries should be increased. At present, for instance, in the district of Anantapur there are only two veterinary dispensaries, one at Tadpatri and the other at Anantapur and one hospital in the municipality of Hindupur. For a district of nine taluks—all large taluks—I think that two dispensaries are not adequate. And if Government really want to come to the rescue of the ryot, there must be at least one dispensary for each taluk. If that is not done, I should think that the Government is not at all solicitious about the interests of the ryot and the cattle will go to rack and ruin. Already the physical stamina of the cattle of the Ceded districts is going down and unless the Government comes to the succour of the ryot, I think, the condition of the ryot must be deplorable."

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Khan Bahadur MAHMUD SCHAMNAD SAHIB Bahadur :—" Mr. President, Sir, I think that if the quality of our cattle is to be improved, we require good bulls—strong animals. In order that the bulls may be kept in a fit condition, we require some dispensaries and other places where they can be concentrated, and to take care of them we want a sufficient number of assistants. Here again, there is a question of birth control. (Laughter.) We should take care that the quality of the coming generation of cattle does not deteriorate by the keeping on of unsuitable bulls. There should be central places where these animals should be kept and. . ."

* The hon. the PRESIDENT :—" I think the hon. Member is not within his province to refer to livestock here. The hon. Member was not in his place when he was last called when the Grant for Agriculture was being discussed."

Khan Bahadur MAHMUD SCHAMNAD SAHIB Bahadur :—" However, Sir, I have pleasure in supporting this motion for a larger number of dispensaries so as to prevent any deterioration in the case of bullocks and other animals we have."

Mr. J. A. SALDANHA :—" Mr. President, Sir, I am aware that the hon. the Minister for Development has been trying to be responsive to the demands and requirements of the people and he has also been trying to meet them. But the excuse is given for inadequate measures on the score of financial stringency. Rinderpest is a very dangerous disease; and it carries away animals in thousands. All the same, there is no adequate provision made for effectively combating this disease. I have my personal experience in this matter. Rinderpest broke out in and near Mangalore some months ago. There was no adequate staff of Veterinary Assistants who could be present in the town and see if measures were taken to check the spread of the disease. Want of serum has been much felt. I may bring it to the notice of this House that some six months ago the serum could not be got in the whole of South Kanara. My Friend, Mr. Davis, Chairman of the Ootacamund Municipality, also brought to the notice of this House only two months ago the utter indifference and incapacity of the department in this respect. Also in reply to a question put some two days ago, the hon. the Minister explained that the authorities in charge of the preparation of serum at Muktesar should not give up their biggest customer—that is the Madras Veterinary department. Why should not the Government take up the preparation of the serum themselves when it is so clearly seen that the interests of the people are concerned. After all it will be only a question of a few thousand rupees. But considering the advantages we could derive from having our own factory, the cost will be worth incurring. I think the department is quite unequal to the task. Sir, we shall take the case of Mysore. Mysore, as every hon. Member of this house is aware, is a comparatively small province, and it is not after all very rich. Mysore introduced serum simultaneous as soon as it was known that one such serum existed. It was already five years ago. The Mysore Government have also established a factory for producing serum. That Government recognizes that it is in the interests of the poor ryot and that his interests should be safeguarded. This country is purely agricultural and the happiness of the ryot to a great extent depends on the health of the cattle. What would be the fate of the ryot if in a particular season all his cattle are carried away? I think, Sir, the hon. the Minister will learn a good deal if he were to visit the province of Mysore. Not only in this respect but also in so many others, there will be

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accessible to large masses of people in rural areas so that when rinderpest breaks out there might be a staff of men ready to give assistance to the people. It is a question of money and the hon. Minister has been probably fighting with the hon. Finance Member to get a large allotment. Probably he failed. Still I hope in the interests of the rural classes, especially the agriculturists to whom the cattle is a natural necessity and to whom the loss of cattle is loss not only of wealth but loss also of the means of carrying on their agricultural operations, the hon. Minister would put up a bold fight and get larger funds and see that the Veterinary department is extended, that more assistants are available, and that more dispensaries are started in places within easy reach of the villagers so that not only in times of the outbreak of rinderpest timely assistance could be rendered, but on other occasions also it might be possible for these assistants to go to the chosen blocks and give demonstrations which might be of real benefit to the people in rural areas. I do not know, Sir, whether members are aware of the fact that with regard to the activities of the Veterinary department even people like myself who reside nearly four or five months in villages have not the slightest idea whether anything is done, whether anybody is ready to give any kind of information to the villagers. I have been travelling about, passing from village to village at the beginning of last year when there was terrible outbreak. People came to me with stories of heavy mortality among cattle and all that I could do was to put interpellations which were answered by the Minister in such a way as to give us the idea that the department itself was not aware of the havoc and that they came to be aware of it only three months after the outbreak and after great loss had been inflicted in very many instances. This would show that there is something defective and that there is need for the extension of the activities of this department. If the activities of this department are to be extended in any particular direction it must be in the direction of reaching the rural areas so that the poor agriculturists to whom cattle is far more important than any other source of wealth may be protected in times of danger and may derive all the benefits in order to make agriculture a paying concern."

Mr. S. SUBRAHMANYA MOOPANAR :—"இக்காருண்ணிய கவர்ன்மென்டாரவர்கள் அனேக இடங்களில் மெடிக்கல் ஆஸ்பத்திரிகளும், மிருக ஆஸ்பத்திரிகளும் வைத்திருக்கிறார்கள்.

"ஒரு மாடானது திடீரெனக் கீழேவிழுந்து தீனி தின்னாமல் இரண்டு மூன்று நாள் மிகுந்த கஷ்டமடைந்ததை உடையவர் மிருக ஆஸ்பத்திரிக்கு கொண்டுபோயினர்.

"அந்த மிருக ஆஸ்பத்திரியில் சுமார் 4 நாள்வரையிலும் நின்றது. மிருக ஆஸ்பத்திரி டாக்டர் தன் கையில் இருந்த உயர்ந்த மருந்துகளை கொடுத்தார். ஷை மாட்டின் சீக்கு சொஸ்தப்படவில்லை.

"மறுபடி மாட்டை உடையவர் வீட்டுக்கு ஓட்டிப்போய்விட்டார். மறுநாள் நாட்டுப்புரத்திலிருந்து ஒரு ஏழை மனிதன் வந்து சீக்குள்ள மாட்டைப் பார்த்தார். அரை அணா கொடுமென்று மாட்டின் சொந்தக்காரரைக் கேட்டார். உடையவர் உடனே கொடுத்தார். நாட்டுப்புரத்தார் வாங்கிக்கொண்டு போய் அரை அணாவுக்கு எருமை மோரும அவரைத் தழையையும் கொண்டு வந்தார்.

knowledge but on the ground that the medicine will become ineffective they do not give it out. If the Government come forward with financial help, they can succeed. Government should make every effort to see that this indigenous system is utilized for the good of the cattle.

"Adequate steps are not taken by the department to arrest the spread of contagious diseases throughout the Presidency. In my part every village is affected by rinderpest and Government was not in a position to supply enough serum for the inoculation. The assistant surgeon was not able in time to get the necessary serum and virus and a number of cattle died consequently. The extent of loss the agriculturist has to incur is enormous. I hope Government will take adequate steps to help the ryots in this matter. In this connexion, Sir, I may say that the number of students trained in the veterinary college are absolutely inadequate and I hope that with the present accommodation and staff there is every possibility of increasing the number of students trained. At present there is really no reserve staff and when an epidemic breaks out it takes a lot of time before assistance is rendered by Government. My friends have already referred to the inadequacy of the staff and the dispensaries, and I hope steps will be taken in that direction."

* Mr. B. Ramachandra Reddi :—"Sir, the Royal Commission on Agriculture has recommended the establishment in each district of a central veterinary hospital having accommodation for the treatment of cattle and for sending out men to the outlying places to impress the value of veterinary dispensaries and treatment of cattle. I want to know how far the Government have pursued that recommendation made by the Royal Commission. I find from the budget estimate there is only an increase of five in the number of touring assistants and seven in that of assistants in regular dispensaries. I think there is also the policy laid down by the Government that most of the touring billets should be converted into regular hospitals and dispensaries. Even towards this end, I wish to know what progress has been made by the Government. As it is I do not think there has been made any attempt by the Government at all. Even the entire budget estimate of Rs. 2,81,100 for 1930-31 shows only a slight increase over the estimate of last year. But no substantial and appreciable increase in the number of dispensaries or in the number of veterinary touring assistants has been made. I wish to know whether the Government are not sympathetic towards the recommendations made or whether they have got in mind any idea of moving a supplementary demand in due course."

* Mr. G. Harisarvottama Rao :—"Mr. President, Sir, if I intervene in this debate it is to point out to the hon. Minister concerned that as in the case of men so in the case of animals the indigenous systems of treatment of diseases must be explored and utilized to the fullest extent. In the matter of treatment of men things have gone too far and in the matter of treatment of animals things have not gone so far. Therefore we are in time to consider this matter to the advantage of the country. India possessed a great deal of animal wealth and the ancients' warfare in India included horses and elephants as principal factors. To-day you will find if you go to the Oriental Manuscripts Library books treating with all diseases connected with elephants, horses and other animals. That field has not been touched or explored on account of the fact that more attention has been paid to urban relief under the British Government and the cause of animals has suffered.

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When that cause was taken up it was taken up on western lines. It has not been attacked till now by giving a oriental turn to the treatment of animals. We have just heard very interesting facts as to the treatment of animals. 3-45 p.m.

"One hon. Friend narrated how a particular animal was treated under the western system and was given up as hopeless, and how it was cured miraculously by a certain recipe of an indigenous doctor. My hon. Friend from Cuddapah has said that there are here and there men practising the indigenous system of preventive medicine, and that before they die out their recipes should be utilized to the fullest advantage by purchasing their ownership. I would go further and state that in Sanskrit, Telugu and other Dravidian languages, there is a great deal of literature bearing upon this subject, and all that literature has to be explored together with what knowledge remains in the country in the practice of preventive medicine for animals. If the hon. Minister—I suppose his term is coming to an end but probably he can lay down some further policies—if he is inclined to do anything at all, it is quite possible that he can make a beginning in a suggestive manner and leave it to his successor to carry on the work for the benefit of this Presidency. I know, Sir, there will be very powerful interests opposed to these schemes, but we have to assert ourselves and find out what best we can do. We have hoary traditions, we have an ancient civilization, we have had sciences at which we mocked at first but respected them afterwards. In India, we have had a strange spectacle where even the sons of the land scorned their own ancient learning, scorned their own methods of treatment, and scorned their own age-long practices, but later on they came to recognize along with their masters of the west the potentialities of Indian thought and Indian practice in all spheres of life. Therefore this sphere of life in India is not to be ignored as of no consequence in Indian history. It is essential that the Government should postulate a policy of exploring indigenous methods and indigenous sciences in regard to these matters. I hope, Sir, that, if to-day's debate will have some effect on the Government, the hon. Minister will proceed to take some steps in the directions indicated in this House."

* Mr. M. V. Gangadhara Siva :—" Mr. President, Sir, I think the hon. Minister will remember quite well the points I gave out in my budget speech when he came into the office of Ministry, that it would be a memorable event if he is to start many dispensaries for the poor animals in every taluk and rural area. As it is, the present system of veterinary help given by the Government is not quite satisfactory, on account of having only one dispensary, where there ought to have been four or five dispensaries. When the ryot is in need of a veterinary doctor, by the time the doctor goes to him his suffering animal expires. So, under these circumstances, Mr. President, I would suggest to the hon. Minister to start as many dispensaries as possible in every taluk and in every unit of rural area, so that ryots will be in a position to get the help of a veterinary doctor as early as possible and save his poor cattle in that way. Sir, the good condition of the animals forms the backbone of the depressed classes, whose entire living is dependent upon the healthiness of their cattle and other animals. So, I once more request the hon. Minister to allot a decent sum of money to open a number of veterinary dispensaries to give relief to the suffering animals."

Mr. Abdul Hameed Khan :—" Mr. President, I did not wish to intervene in this debate except to say one thing. There is absolutely no difference of

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opinion with regard to the fact that there is a great need for veterinary dispensaries in all parts of the province, and it is the duty of the Government to see that if one section of it looks to the welfare of humanity, another section in charge of this department should see that the cattle and other animals in the country are well treated and are prevented from getting diseases. Sir, at the same time, I would like to point out that, in addition to maintenance of veterinary dispensaries, the Government will reduce much of its expenditure if it comes to the rescue of other institutions established by private bodies for the care of animals, by helping them and giving them annual grants. I rose to speak, Sir, as I said, in order to point out the importance of this aspect of the question, namely, that the Government will be able to reduce the expenditure incurred on their part for the maintenance of veterinary dispensaries wherever they are maintained, if they would make up their mind to aid the institutions which are run by popular bodies by giving them help in the shape of annual grants."

* The hon. Mr. M. R. SETURATNAM AYYAR :—" Sir, the chief points raised by several hon. Members of this House regarding the measures necessary for making the work of the veterinary department more useful and effective are the opening of a serum institute, the increase in the number of veterinary dispensaries, increase in the cadre of veterinary assistants and touring billets and the adoption of a policy regarding investigation into the system of indigenous medicines for animal diseases. As regards the serum institute, I have already said in the general discussion on the budget this year—and I can only repeat the same now—that a complete scheme is now ready for the acquisition of a site for the construction of an institute and that the scheme can be set in motion immediately the Council makes a grant. But this Government do not stand alone in this matter. The Government of India have been supplying serum to Local Government, and this Government are their largest customers to the Mukteswar Institute because the Madras is much ahead of any other province in India in regard to serum simultaneous inoculations. To stop suddenly our custom will seriously embarrass the Government of India and will put their serum institute to a loss. So, time and opportunity has to be given to the Government of India so that they may make an adjustment. We have been for a long time customers of the Government of India, and it is in fairness to our Government and to the Government of India that we should give them an opportunity to adjust matters. So we have been in correspondence with them, and as soon as we receive their reply, the matter will be taken in hand.

" With regard to opening more dispensaries and appointing more veterinary assistants, I may say that our aim has been to have at least one dispensary at each taluk headquarter. The only question now is want of trained hands. All the trained hands already available have been appointed. I can give some figures to show the progress made in the last three years : we had in 1926 200 veterinary assistants and now in 1929 we have 246, and the expenditure also rose from Rs. 82,000 in 1926 to Rs. 1,07,000 in 1929, so that we have gradually improved the conditions of service of the veterinary surgeons and opened more dispensaries and created more touring billets also. To get more trained men, we have increased the number of stipendiaries at the college from 15 to 40, and we hope that in the course of a few years we will have enough trained hands to man each dispensary with one veterinary surgeon under the scheme we have on hand at present."

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(Mr. K. Koti Reddi said something inaudible from his seat.)

* The hon. the PRESIDENT :—" I request the hon. Minister to address the Chair and not to mind the interruptions."

* The hon. Mr. M. R. SETURATNAM AYYAR :—" We cannot go on all on a sudden in regard to this matter, but we can proceed only gradually. The Government are also fully alive to the needs of the situation in regard to cattle diseases, and are trying their best to carry on experiments for checking those diseases. With regard to the treatment by the indigenous system of medicine, I may say that I too come from the village, and I have seen some Indian drugs administered to the cattle which proved satisfactory. I have noted down what has been said on this subject, and I will see whether anything could be done as was done in the case of the indigenous system of medicine for human beings.

" Some mention was made regarding the pay and prospects of the veterinary surgeons and assistants in this province, and I may say that I quite sympathize with them. But the only consideration was that when the matter was examined by the Government we found that their pay was quite sufficient when their qualifications and their work were compared with similar services. The only difference between this service and the other services was that only 10 per cent of these veterinary assistants could rise to higher grades. And so we have made provision for 15 per cent being admitted to the selection grade, and thus we hope that in that way a number of people can have the benefit of rising to higher posts. Some hon. Member suggested that we should have a new provincial service as in the case of some other departments. This question has to be examined, because it has to be compared and contrasted with other services, to see whether any such thing can be done in the near future. Of course, I see the immediate necessity of giving relief to the men in the higher grades in the cadre.

" With regard to the suggestion of compulsory inoculation made by Mr. Govindaraja Mudaliyar, I can only say that we are not at present able to get all the serum that is in demand now. A system of compulsory inoculation will mean great cost and a very large supply of serum for which we have not got the source.

" Mr. Srinivasan suggested that poultry breeding might be undertaken. I do not know what difficulties we will encounter in such ventures, but I will have the question examined.

" In regard to grants to private institutions raised by one hon. Member, the Government will be glad to see that private institutions are opened, and, if they apply for grants, Government will consider what all aid they can give. Formerly, some institutions were aided, and the grants were stopped as they were not working satisfactorily. But, if anybody comes forward and gives an undertaking to run such institutions on proper lines, the Government will examine the question again with a view to aiding them.

" Mr. B. Ramachandra Reddi suggested that the budget estimate of this year is not very much in excess of the revised estimate of last year. I may inform him that in the last year's budget we had greatly increased the provision for circle officers and so on and that is why there is no appreciable increase in the budget provision for the purpose this year." 4 p.m.

Mr. B. RAMACHANDRA REDDI :—" I was speaking of only hospitals and dispensaries."

knowledge but on the ground that the medicine will become ineffective they do not give it out. If the Government come forward with financial help, they can succeed. Government should make every effort to see that this indigenous system is utilized for the good of the cattle.

"Adequate steps are not taken by the department to arrest the spread of contagious diseases throughout the Presidency. In my part every village is affected by rinderpest and Government was not in a position to supply enough serum for the inoculation. The assistant surgeon was not able in time to get the necessary serum and virus and a number of cattle died consequently. The extent of loss the agriculturist has to incur is enormous. I hope Government will take adequate steps to help the ryots in this matter. In this connexion, Sir, I may say that the number of students trained in the veterinary college are absolutely inadequate and I hope that with the present accommodation and staff there is every possibility of increasing the number of students trained. At present there is really no reserve staff and when an epidemic breaks out it takes a lot of time before assistance is rendered by Government. My friends have already referred to the inadequacy of the staff and the dispensaries, and I hope steps will be taken in that direction."

* Mr. B. Ramachandra Reddi :—"Sir, the Royal Commission on Agriculture has recommended the establishment in each district of a central veterinary hospital having accommodation for the treatment of cattle and for sending out men to the outlying places to impress the value of veterinary dispensaries and treatment of cattle. I want to know how far the Government have pursued that recommendation made by the Royal Commission. I find from the budget estimate there is only an increase of five in the number of touring assistants and seven in that of assistants in regular dispensaries. I think there is also the policy laid down by the Government that most of the touring billets should be converted into regular hospitals and dispensaries. Even towards this end, I wish to know what progress has been made by the Government. As it is I do not think there has been made any attempt by the Government at all. Even the entire budget estimate of Rs. 2,81,100 for 1930–31 shows only a slight increase over the estimate of last year. But no substantial and appreciable increase in the number of dispensaries or in the number of veterinary touring assistants has been made. I wish to know whether the Government are not sympathetic towards the recommendations made or whether they have got in mind any idea of moving a supplementary demand in due course."

* Mr. G. Harisarvottama Rao :—"Mr. President, Sir, if I intervene in this debate it is to point out to the hon. Minister concerned that as in the case of men so in the case of animals the indigenous systems of treatment of diseases must be explored and utilized to the fullest extent. In the matter of treatment of men things have gone too far and in the matter of treatment of animals things have not gone so far. Therefore we are in time to consider this matter to the advantage of the country. India possessed a great deal of animal wealth and the ancients' warfare in India included horses and elephants as principal factors. To-day you will find if you go to the Oriental Manuscripts Library books treating with all diseases connected with elephants, horses and other animals. That field has not been touched or explored on account of the fact that more attention has been paid to urban relief under the British Government and the cause of animals has suffered.

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Kasimode battery waited for the 'Emden' to reach our shore and set the petrol tanks on fire and then after she had sailed in the direction of Pondicherry the battery replied. 'Emden' would not have started bombardment if the battery had not been silent all along. So also, the department should not wait for the disease to appear to begin their operations. The serum-simultaneous method of inoculation is intended to prevent the epidemic coming on. Do we wait for smallpox to attack a person to start vaccination? Similarly you must see that the cattle are inoculated before the disease breaks out. The complaint of the officers in the districts have been that they have no serum. From Mukteswar you get only serum and it losses much of its efficacy before we get it here. Virus is made here. When you make virus here, why not you also make serum which is its by-product? When you prepare rice, you have also got *conjee* water. It is its by-product. You have got men and you have got facilities. You need not go to Coonoor or Aravankadu for making serum. Those places are winter-resorts for the rich and are not necessarily suitable places for manufacturing serum. Serum and virus can be made in Madras. Lymph is made at Guindy. There is a big maidan there. I suggested long ago that if you are short of funds Mr. Goenka would place all the animals of his Pinjarapole at your disposal for the preparation of serum and virus and also contribute something for the expenses. Why not you make a beginning now and see that the disease is clean rooted out of the province? Sir, what is wanted is determination. Do not believe your experts. They have their own way of doing things. We had an expert in Madras for water filtration. He wanted to filter away our money. The sister State of Mysore has rid rinderpest clean of its territory. It is therefore disgraceful for this Government to go to Bengal and beg for some serum and virus when they cannot get them from Mukteswar. But what prevents you from making it here? You have got the men and you have got the facilities. We want the Minister to do it here and if he says that he cannot to do it, let it be tried by private agency. Let the Government say that they will not do it and then we will see that a private agency is formed, serum is prepared in large quantities and placed at the disposal of the poor ryots who are now suffering very much."

The motion was by leave withdrawn.

Demand XXIV was then put and carried and the Grant was made.

DEMAND XXV—CO-OPERATIVE SOCIETIES.

The hon. Mr. M. R. SETURATNAM AYYAR :—"Sir, on the recommendation of His Excellency the Governor, I move

> '*that the Government be granted a sum not exceeding Rs.* 11,25,000 *under Demand XXV—Co-operative Societies*'."

* Rao Sahib B. VENKATARAMAYYA NAYUDU :—"Sir, I rise to move

> '*that the allotment of Rs.* 18,400 *for Pay of officers be reduced by Rs.* 100'.

"In this connexion, I wish to offer one or two remarks. It is the declared policy of the Government to non-officialize the department in course of time. Sir, although the department has been in existence for several years, I submit that no beginning in an effective way has been made to non-officialize it. On the other hand we find that a reactionary policy is being pursued in this matter. It began with assistant registrars for some districts in the beginning and now we have an assistant registrar for every district. I am speaking only

of officers of the higher grade. Of course, the number of minor officials has also been increased in the department. For a number of years, honorary assistant registrars were being appointed for each district and for some reason or other that system has now been discontinued. Well, the result is that the expenditure in the department has been growing and the policy which the Government kept in view in the beginning when the department was formed was not followed and the promise not fulfilled. It is no use that the Government should now say : 'Well, people have not yet sufficiently trained themselves to take part in the movement.' I believe, Sir, from my experience as a director and secretary of the central bank and president of the co-operative federation in my own district, that there are non-official gentlemen who are trained and who exhibit a good deal of enthusiasm in the working of the department, able to do the duties with credit to themselves and usefulness to the public, if they are entrusted with duties now looked after by the officials of the department. I think that in other districts also similar conditions prevail. At any rate where there are conditions favourable and where men with intelligence and enlightenment are ready to take up the work, I suggest to the Minister that the experiment should be tried and non-official gentlemen should be allowed to do the work of at least the work of assistant registrars. In that way it would be possible to reduce the expenditure which is being incurred by the Government and to fulfil the promise which was given at the beginning when the department was constituted.

"Sir, one answer that seems to have been attempted is that the time has not yet come for introducing these non-official gentlemen to run the department. If that answer can be given at all, it can be given at any time, even after half a century hence. Not being satisfied with a reply of that kind, I request the hon. Minister to make a beginning. This policy that the ideal is to non-officialize the department has also been reiterated in the Townsend Committee report. With these few words I place the motion before the house."

* Mr. A. HARISCHANDRUDU :—"Mr. President, Sir, I second this motion. Speaking of my district, East Godavari, I assure you, Sir, that there are many non-official gentlemen who can take the place of officials and run the co-operative department efficiently. I believe the same thing can be said of other districts also. I therefore think it right that attempts should be made to non-officialize the department and make the administration cheaper. If the department is run by non-official agency, the poor ryots will have free access to the concerned men to ventilate their grievances. The honorary workers would be one of them and they could easily grasp their needs and sympathize with them and help them.

"Again, Sir, by appointing non-officials you can also reduce the cost of maintenance of the department. Sir, it will also help non-officialization. Officialization will not be popular as against the free spirit of democracy. I therefore suggest that earnest attempts should be made to non-officialize the co-operative movement.

4-15 p.m. "Another thing that I wish to emphasise is the high rate of interest which the co-operative societies levy on the poor ryot who borrows from them. These societies are meant to help the poor ryot and not to ruin them. The rates of interest are worse than Marwadi rates. I do not know why they should be allowed to charge such high rates. These societies are making large gains from poor ryots. I therefore suggest that some steps should be taken to reduce the high rates of interest charged. I second the motion."

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* Mr. S. N. Dorai Raja :—" The Development department is trying in every way to help the agriculturists by giving effect to the recommendations of the Royal Commission on Agriculture and also those of the Lee Commission. I think the most important step that the Government have taken is the acceptance of the recommendation of the Townsend Committee in establishing a Central Land Mortgage Bank which will go to increase the material prosperity and strengthen the economic position of the agriculturists. The Government have appointed a Sub-Deputy Registrar in every district and they are trying to give liberal grants to district federations to advise and help the panchayatdars. They want that these Assistant Registrars should advise the panchayats whenever they are in need of such advice. I am very glad to see that my hon. Friend the Minister for Development has prevailed upon the Finance Member to guarantee $4\frac{1}{2}$ per cent interest up to a maximum of 50 lakhs of rupees. That is an achievement which any Minister can be proud of and it incidentally explodes the notion that Sir Thomas Moir was an unsympathetic skinflint.

" I have got one or two suggestions to make to the hon. Minister and I hope they will be taken in the spirit in which they are made. I would strongly advise him to see that proper persons are appointed, I mean persons who will not be a party to forming petty factions in villages and who will be above all temptations. The policy of the Government must be to develop the means and the technique underlying this co-operative movement and to interpret to people the advantages of the co-operative movement. The activities of this department as well as those of every other department should be rightly interpreted to the people in villages. For doing such work a Publicity Officer is quite essential to bring home to people that the Government of this Presidency are doing everything to help the people. If that is to be done, people will have to be taught in their own vernaculars the advantages of the co-operative movement. If people will properly understand what the Government are doing for them, it will go a great way to vitalise our democracy and also remove all suspicion and misunderstanding. It is no use building democracy at the top but it should be based upon their sympathy and understanding."

* The hon. the President :—" I think it is going far away from relevancies of discussion. "

* Mr. S. N. Dorai Raja :—" All right, Sir. I will not refer to them.

" I hope the hon. Minister will bear in mind all the suggestions that I have put forward. With the limitations that have been placed on him by dyarchic dispensation he has done a good deal and I think I may congratulate him on the achievement he has made and also the indefatigable Secretary Mr. Ramamurthi. I oppose the cut motion."

* The hon. Mr. M. R. Seturatnam Ayyar :—" Sir, it is rather a large request that the Government are asked to comply with, viz., that they should non-officialize the co-operative agency. I could say this much : that the Townsend Committee advanced the plea that on account of non-officialization more over-dues and more delays in the collection were found out and that time had not yet come for the complete non-officialization of this department. So with a view to safeguard the interests of the tax-payers it was thought that for some time to come at least the department should not be completely non-officialized. For the present both the officials and non-officials should co-operate with each other in order to make the movement a success. It is

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with this view that the number of Deputy Registrars has been increased. If this scheme is found to be successfully working, then the Government will think of handing over the whole department to non-official bodies. I would therefore suggest to the hon. Member who has moved this motion to wait and see."

The motion was by leave withdrawn.

* Mr. R. NAGAN GOWDA :—I beg to move

'*that the allotment of Rs.* 18,400 *for pay of officers be reduced by Rs.* 100.'

"Sir, I want to move this cut with a view to discussing the need for greater activity all round and especially in organizing non-credit work."

"I would take the question of organization of non-credit work first and then the question of increased activity generally in this department. Sir, the co-operative movement in this country has taken rather a peculiar form of development. In countries where it took its origin and made rapid growth it was started as a means of bringing about co-operation among producers and also among consumers. Whereas in this country it has taken the shape of purely a borrowing concern.

"If you look at the development of co-operative organizations in Denmark, you will notice that there the ryots have co-operated to sell their agricultural products like bacon, eggs, butter and milk and such other things. The greatest development of co-operation in other parts of the world is in a line with that in Denmark. In this country it is different. For example, in my district there are only three non-credit societies doing good work. Sir, it is this aspect of the question that I think ought to be attended to by the department. It is here that the agriculturists—co-operators can be benefited to a great deal. At present for the purpose of selling jaggery, rice, cholam or cotton the agriculturist has to incur expenditure in the shape of brokerage to the merchant and also other items of expenditure which are unknown in other civilized countries. For instance, brokers in Bellary district charge the agriculturists for maintenance of clerks in their office and also for paying dharma. It is strange the growers have to pay these from their pockets. These items can be very well eliminated and brokerage can be much further reduced if there are co-operative societies of producers and consumers.

"There is another aspect which I wish to touch upon and that is purchasing of articles that are consumed by the general public. This is an important part of movement and the Triplicane Urban Co-operative Society is doing excellent work in this Presidency. But it is only one in the whole Presidency. In the mufassal we have very few organizations of that sort. Co-operation ought to be introduced among agriculturists to form breeding associations to breed proper cattle and also for raising better seeds, etc.

"Regarding the other part of the question, viz., greater activity of the department, I want to state only one thing and that is that the large percentage of societies that are now organized in the country are not active. For increased activity it is not at all necessary that there should be an increase in the number of societies. If the present number of societies are made to work more efficiently, it will be enough. Some of them are not working at all. If they are at least made to work properly, I think we will have achieved a considerable lot. In the last 15 or 17 years since the Act was passed in 1912, amongst the number of societies that have been organized

I sometimes wonder how many of them have been working efficiently. In this respect I think the Government should give subsidies to local supervising unions and federations.

"One more point I wish to mention and that is this: as in the rest of the Development department here also the Madras Service cadre is followed. I was surprised this morning at the statement made by my hon. Friend Mr. Ramalinga Chettiyar asking the hon. the Minister to reconsider the question of increasing the salaries . . ."

Rao Bahadur T. A. RAMALINGA CHETTIYAR :—"I never said so about increase of salaries. I said that the two scales ought to be the same."

* Mr. R. NAGAN GOWDA :—"I am glad to have that statement but he was not definite this morning."

* The hon. the PRESIDENT :—"I am not able to follow how a reference to whether Mr. Ramalinga Chettiyar is correct or not is relevant to this motion. Hon. Members will not be justified in taking this opportunity to twit each other."

* Mr. R. NAGAN GOWDA :—"With these few words I move my motion."

The motion was duly seconded.

Mr. S. ARPUDASWAMI UDAYAR :—"Sir, the report of the year 1928-29 is very interesting reading. . . ." 4-30 p.m.

* The hon. the PRESIDENT :—"It is better to dispose of non-credit societies and then go to the general policy."

Mr. G. HARISARVOTTAMA RAO :—"Sir, I want to know from the hon. Minister what lines of organization he proposes for the co-operative movement in this Presidency. . . ."

* The hon. the PRESIDENT :—"It is better to confine discussion only to non-credit societies."

* Mr. G. HARISARVOTTAMA RAO :—"The whole co-operative movement for the last quarter of a century has gone on in one direction, and that is, the development of credit societies. Very great enthusiasts of co-operation have come to realize that, if co-operation stops with this aspect of development, there will be no real advancement at all in the movement. The world is fast progressing in this matter as in other matters. My hon. Friend from Bellary pointed out the example of Denmark. I would point out the example of a country nearer England; I would point out the example of Ireland. If the co-operative movement has developed best in those countries, Denmark, Ireland, Switzerland, etc., it is because the movement there has developed in the direction of helping the ryots to produce more and to manufacture more. In India unfortunately, for one reason or other on account of the poverty of the people probably, the movement has taken the turn of mere credit societies; authorities on the subject of co-operation have now turned their attention to what is called rural reconstruction work; they have turned their attention to societies that will help rural reconstruction. Now it is incumbent upon the Government to examine the question afresh and see what is essential to do in this direction. To mention only one or two types of societies, cattle-breeding societies, egg-producing societies in the advanced countries are

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examples of a new direction given to the co-operative movement. India is mostly an agricultural country and so the best chance in India is mainly for agricultural industries; the hon. Minister will have to direct his attention to the question of developing the co-operative movement on such lines as will help agricultural industries. It has been very often mentioned in Government reports that every attempt was made to develop non-credit societies. All that the Government has done up to date is not much. Non-credit societies are few and far between. In every district there are not more than a handful of these non-credit societies. Even these non-credit societies are more industrial than agricultural. Weavers' societies, cobblers' societies and such other societies form a major part of these non-credit societies. Therefore it is clear that the Government has not found out a new direction in which it should have put all its available energy and carried out reforms. It is time that the Government undertakes to work out a new orientation of the co-operative policy and encourages agricultural industries to develop on co-operative lines. But, Sir, I am free to admit that it is not an easy task. We have to deal with an agricultural population spread over a large area; we have to deal with an agricultural population which has not been sufficiently educated on the lines that may be necessary for the purpose of rapid development in this matter. The duty rests upon the Government even there. The Government has not been very active in taking up fresh lines of activity and in distributing fresh knowledge to the people in the villages. No doubt, Sir, now and then some demonstrations are given; now and then some leaflets are distributed. But systematic education of the population on the lines that should be followed if the nation has to work on proper lines of development; that kind of education has not been attempted by the Government. Therefore there are two duties cast upon the Government if this co-operative movement is to go forward in a proper direction. The credit part of it stands really discredited. The hon. Minister replied a little while ago on a earlier cut motion that outstandings were not collected by many societies and that therefore non-official agency could not be used to a larger extent than it is done now. That difficulty arose because the productivity of the country was not encouraged; what was really encouraged was merely taking loans; taking loans was very easy and repaying them was difficult for a poor population. Therefore the fault lay in the direction the co-operative movement took, not so much with the non-official agency. If the hon. Minister believes that the fault lay with the non-officials, he is wrong; non-officials carried on the work as efficiently as any local body. Some amount of strict audit may be necessary; some amount of strict accounting may be necessary to develop an organization by a non-official agency. I think that non-officials are as good as officials, if not, better. Therefore I want the hon. Minister to realize that the mistake was this; productive schemes were not laid down for the co-operative movement. It was all directed to credit societies. The answer may be that it was inevitable in a poor country where the ryot was overburdened with debt. It may have been inevitable at one time; it is no longer inevitable and it is suicidal to go on in that line without developing the productivity of the soil. If you develop the productivity of the land, it will help the ryot to clear off his debts.

"We are at present importing foreign cheese. As a matter of fact, all the restaurants of Spencer & Co. are supplied with foreign cheese, and foreign butter. A great deal of foreign products is being imported into this country. India would like to have her own agricultural industries and if

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the co-operative movement takes into its head to develop agricultural industries, there is a great future before us. I am afraid, Sir, that the Government has not directed its attention to either cattle-breeding, or poultry farming or dairying, butter and cheese-making, and things of the kind. It is time that the department did so. It is time that the department does some propaganda work; the propaganda work that is to be done by this department is really more important. Though we have had the co-operative movement amidst us for over 25 years and though very great enthusiasm was evinced by non-officials at one stage of the movement, yet on account of lack of real propaganda work, the Government failed. I feel that the time is come when the whole policy of the department has to be reconsidered in conjunction with the scheme of rural reconstruction. I am glad, Sir, that the Central Urban Bank has been taking some pains to do rural reconstruction work . . ."

* The hon. the PRESIDENT :—" I request the hon. Member to keep up his promise of speaking on non-credit work. I am afraid the hon. Member is traversing over the whole policy of the department."

* Mr. G. HARISARVOTTAMA RAO :—" The establishment of non-credit societies depends upon the work that the department is able to put in on rural reconstruction. I hope, Sir, that the work of the hon. Minister will be directed to this end."

* The hon. Mr. M. R. SETURATNAM AYYAR :—" Sir, I may inform hon. Members of the House that the Government are already taking action to develop the non-credit side of the co-operative movement. Under the reorganization scheme recently introduced, the Deputy Registrars are mainly responsible for the non-credit work in each district. The Joint Registrar is co-ordinating the work of the Deputy Registrars in this direction. Besides, the Government have sanctioned Senior Inspectors at the rate of one for each district for non-credit work and ten Junior Inspectors are to be attached to selected loan and sale societies for the purpose of their intensive supervision. It is hoped that, as a result of these, non-credit work will grow rapidly. It is too soon to judge the results. I wish to say that we are already taking interest in the matter of non-credit work by the Co-operative department."

* The hon. the PRESIDENT :—" I shall now put the motion to the vote of the House. 4-45 p.m.

" The question is to reduce the allotment of Rs. 18,400 for pay of officers by Rs. 100."

The motion was negatived.

Mr. S. ARPUDASWAMI UDAYAR :—" Sir, I move—

' *To reduce the allotment of Rs. 18,400 for pay of officers by Rs. 100.*'

" Mr. President, Sir, I must congratulate the hon. the Minister on his new orientation of policy with regard to this co-operative work. It was found necessary to constitute a committee called the Townsend Committee and to give effect to its recommendations, to check the registration of new societies and to see that all the old societies were brought up to the mark

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and all their over dues reduced very much. All these things show that the old policy of intense propaganda work as an essential preliminary for starting and sustaining co-operative work was not consistently adhered to and operations continued without the ground being sufficiently prepared in order that the seed may germinate and sprout properly. I am glad to find a statement in the Annual Report of the Working of the Co-operative Societies for the year 1928–29, which shows how the department has begun to tackle the question on right lines. It shows that the Registrar of Co-operative Societies while in Bellary had a discussion with some ryots where collections are notoriously poor. The report says, 'Explanation of its objects and methods, of the reason for every provision and of the source and destination of its funds awakened a lively interest and a desire to try again to make their societies a success. The instruction we have provided for by the Government subsidy to Federations to conduct a brief course of instruction to rural panchayatdars helps considerably in this respect, but more is necessary to rouse and maintain a constant genuine interest in a society among its members'. Therefore, the success of co-operation depends upon the amount of education that is given to the people to understand what the objects of co-operation are. This has been shown by the success that has been achieved by certain co-operative societies which are working for the benefit of the fisher-folk and also for those whose uplift is the work of the Labour Department. There, we find the co-operative department lending their officers and these officers having the co-operation of enlightened non-officials engaged in work among the fishermen. Thanks to the hon. the Home Member who has given an impetus to the expansion of co-operation among the Kallars in Madura, I find that the officers and the panchayatdars are working in co-operation with each other and it is no wonder that tangible results are obtained there. Likewise, if this co-operative movement is to spread and awaken real interest in the people and if it is to fulfil its objects and achieve very good results, it is very necessary that every kind of association, every kind of agency should be called to its aid, and its co-operation enlisted for disseminating knowledge regarding the scope and objects of the movement. Like the special societies for Kallars or for fisher-folk, we have a number of agencies and a number of associations. As matters stand, in villages there are factions and on account of these factions and in spite of the frequent inspection or timely warning of officers and honorary workers, an opportunity is given to parties opposed to the president and members or their rivals to allow the work of the co-operative societies to drift, to allow them to remain more or less moribund until, at last when it is found that the person responsible is negligent and overdues are high, at once a prosecution is launched and he is brought to grief, even though he is prepared to make good the loss from out of his pocket. Therefore, on this point I would submit to the hon. the Minister that he must see that the co-operation of every kind of association or agency is availed of, in order that the people may be educated in rural areas on the advantages of co-operation and on the best means of realizing the objects of the movement.

"As the previous speakers have stated, the possibilities of co-operation are very many and various, and the Government in starting the Land Mortgage Bank have taken a very serious responsibility. They are undertaking a work which is calculated to produce very great benefit to the people and would contribute very materially to the economic prosperity of the country. Here, again, there is need for much propaganda work. When

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once a society is started after a great deal of trouble taken by officers, interest must be kept up by means of public lectures and by conversation with the leaders to impress upon them the importance of co-operation in general and the land mortgage bank in particular. Otherwise if a society is started and if after sometime it is found that it is not doing the work, for which it was started, what useful purpose will be served by merely closing it down ? That is not the kind of training that is required. I am glad to know that the Co-operative Institute named after Mr. Hood is doing very good work in Tanjore and that this institute has also become a centre for propaganda work in co-operation. There is also a library attached to it and certain journals stocked in this institution. The report also refers to one or two other institutes. I would ask the hon. the Minister for Co-operation to see that in addition to these institutions, existing associations such as the Sivagnanam Association, which work on a co-operative basis, are subsidised so that they may become centres for the achievement of the benefits of co-operation in their surrounding areas.

"The hon. Minister for Agriculture knows how impetus has been given to agricultural associations to work on a co-operative basis. Therefore, these bodies can be subsidised just as they have subsidised federations and unions and they ought to impress upon the members of the branch how punctual ought to be their payment. If this is done, the success of the movement will be assured and there will be no necessity later on for having such a costly staff merely for the sake of supervision.

"Sir, there is one aspect of the co-operative movement which particularly appeals to people interested in rural welfare and that is building societies on co-operative basis. If Government would come forward with loans and give them liberally, I think many of the cheris and many of the ugly portions of the villages to which reference has been made by many previous speakers, would disappear and better buildings would come to be constructed and immense benefits would accrue from the activities of these building societies, not only here and there in towns, but also in rural areas. Therefore, I would earnestly press upon the attention of the hon. Minister that he should try his best to see that loans are granted at a cheap rate of interest not only in urban areas but also in villages to develop this kind of co-operative work, which I think is more intimately connected with rural reconstruction.

"There is one other point, with regard to agricultural societies run on co-operative lines. In certain places a great deal has been done by honorary workers. We also find mention in the report of the very good work done by two or three honorary workers in Madura and in one or two other places. I know that in Trichinopoly, owing largely to the encouragement of the hon. the Minister, associations are about to be formed and run on co-operative basis. If Government would encourage these honorary workers and allow them to carry on some kind of propaganda, I believe, it would not be necessary, as time advances, to increase their staff, but the object of co-operation can be achieved with the help of the non-official agency. With these few suggestions, I commend my motion to the acceptance of the House."

SWAMI A. S. SAHAJANANDAM :—" மக்கள் வாழ்க்கைக்கு முக்கியமானது எனக் கண்டே அரசாங்கத்தார் ஐக்கிய நாணயச்சங்க இலாகாவை ஏற்படுத்தியுள்ளார்கள். எத்தகையவழியவரும் அதன்மூலம் பொருள் சேர்க்கலாம். சங்கங்களின் பயன் பொருள் சேகரித்தலும் விரு

த்தி செய்தலும் சிக்கனமாக வாழ்தலுமாம். ஐக்கிய நாணயச்சங்கங்களை இரண்டு வகையாகப் பிரிக்கலாம். ஒன்று ரெகுலர் இலாகாவால் நடத்துவது. மற்றொன்று தொழிற் கமிஷனர் இலாகாவால் நடத்துவது. ரெகுலர் இலாகாவால் ஜாதி இந்துக்களுக்கு நடத்தப்படுகிறது. லேபர் இலாகாவால் தாழ்த்தப்பட்டவர்களுக்கு நடத்தப்படுகிறது. தாழ்த்தப்பட்டவர்களுக்கு வைத்துள்ள சங்கங்களால் பண லேவாதேவி நடத்தப்படுவதில்லை. காரணம் எங்கு மனைக்கட்டுகளில்லையோ அங்கு மனைக்கட்டுகள் வாங்கிக் கொடுக்கும் பணங்களை வசூலிக்கவே ஐக்கிய நாணயச்சங்கங்கள் நிறுவப் பெறுகின்றன. ஒருவனுக்கு நூற்றைம்பது ரூபாய்களுக்கு மனைக்கட்டு வாங்கிக் கொடுத்துள்ளார்கள். அதற்கு மாதம் ஒன்றுக்கு வட்டி ஏறக்குறைய ஒரு ரூபாய் ஆறணாவாகிறது. மாதம் ஒன்றுக்கு ஒரு ரூபாய் வீதம் கொடுத்தால் இருபது வருஷத்தில் தீர்ந்துவிடுமென நினைக்கிறார்கள். ஒரு ரூபாய் ஆறணாவிற்கு மாதம் ஒன்றுக்கு கொடுத்துவரும் ரூபாய் ஒன்று போக பாக்கி மாதம் ஒன்றுக்கு ஆறணா நிற்கிறது. ஒரு வருஷத்தில் வட்டியில் மாத்திரம் நாலரை ரூபாய்கள் பாக்கி நிற்கின்றன. இருபதாண்டுகளில் வட்டியில் 90 ரூபாய்கள் பாக்கி நிற்கின்றன. அசல் ஏற்கன 150 ரூபாய்கள் இருக்கின்றன; கூடி வட்டி 90 யும் சேர்த்தால் 240 ரூபாய்கள் இருபதாவது ஆண்டின் இறுதியில் பாக்கி யேற்படுகிறது. மாதாமாதம் ஒரு ரூபாய் வீதம் 20 ஆண்டுகளில் பெற்றுக்கொண்ட ரூபாய்கள் 240 போக பாக்கி 240 ரூபாய்கள் நின்றுவாங்கிய மனைக்கட்டையும் மீதமிருக்கும் சொத்துக்களையும் கொண்டுபோகு நிலைமை வருகின்றது. ஆகவே ரெகுலர் இலாகாவால் நடத்தப்படும் சங்கங்களால் ஜாதி இந்துக்களுக்கு லாபம் வருகிறது லேபர் இலாகாவால் நடத்தப்படும் சங்கங்களால் தாழ்த்தப்பட்டவர்களுக்கு நஷ்டமேயுண்டாகிறது. சங்கத்தின் பயனாகிய சிக்கணம், பொருள் சேர்த்தல், லேவாதேவி முதலிய பயனுண்டாவதில்லை. இந்த நிலைமையை அரசாங்கத்தார் உணர்ந்து ஏழை ஆதிதிராவிடர்கட்கு ஏற்பட்டுள்ள மனைக்கட்டு கடன்களைத் தள்ளிவிடவேண்டுகிறேன். தள்ள முடியாதானால் வட்டியைத் தள்ளிவிட்டால் மாதாமாதம் கட்டும் பணம் அசலுக்குச் சேர்ந்து கடன் தீரும் ஆதலால் அரசாங்கத்தார் கருணைகூர்ந்து மனைக்கட்டு கடன்களில் வட்டியைத் தள்ளி முதலை மாத்திரம் பெற்றுக்கொள்ளவேண்டுகிறேன். இவர்களுக்கு கோவாப்ரேட்டிவ் யூனியனில்லை. ஜாதி இந்துக்களுக்கு யூனியன் பிடரேஷன் முதலியவைகளிருக்கின்றன. ஜாதி இந்துக்களுக்கு ஜில்லாவிலேயே அர்பன்பாங்கு இருக்கிறது. கிராமச்சங்கத்தார் யூனியனுக்குப் பணம் அனுப்புகிறார்கள். யூனியனார் பாங்கிற்கு அனுப்புகிறார்கள். தாழ்த்தப்பட்டவர்களுக்கு யூனியனில்லாமையால் மணியார்டர் மூலம் அனுப்பவேண்டியதாயிருக்கிறது. அதனால் மணியார்டர் கமிஷன் எவ்வளவு செலவாகிறதென்பதைப் பாருங்கள். தாழ்த்தப்பட்டவர்களுக்கு பாங்க் சென்னையிலுள்ள கிறிஸ்தவ சென்ட்ரல் பாங்கு தான். ஏதேனும் தகவல் தெரியவேண்டுமானாலும் பாங்க் மீட்டிங்கிற்கு வரவேண்டுமானாலும் எவ்வளவு பணம் செலவழிக்கவேண்டுமென்பதைச் சிந்தித்துப் பாருங்கள். திருநெல்வேலியிலிருக்கும் ஒருவர் சென்னையிலுள்ள பாங்கிற்கு வரவேண்டுமானால் பொருள் நஷ்டமும் காலஹரணமும் எவ்வளவாகிறதென்பதையுங் கவனியுங்கள். ஆகவே கனம் மந்திரியவர்கள் இவ்விஷயத்தில் தக்கவாறு கவனஞ் செலுத்தாவிடில் தாழ்த்தப்பட்ட மக்க

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ளின் குடிகள் மூழ்கிப்போகும். லேபர் டிபார்ட்மென்டிலிருக்கும் ஐக்கிய நாணய சங்கங்களை ரெகுலர் இலாகாவிற்கு மாற்றக்கூடாது. லேபர் இலாகாகாரர் தாங்கள் வாங்கிக்கொடுத்த மனைக்கட்டுகளை பிடுங்கமாட்டார்கள். ஆனால் ரெகுலர் இலாகாகாரரோ பணஞ்சேரவில்லையானால் உடனே மனைக்கட்டு முதலியவற்றை ஏலம் போட்டு விடுவார்கள். எந்தக்காரணத்தை முன்னிட்டும் ரெகுலர் இலாகாவிடம் தாழ்த்தப்பட்டவர்களின் சங்கங்களைக் கொடுக்கக்கூடாது. கனம் அபிவிருத்தி இலாகா மந்திரியவர்கள் இவ்விஷயத்தில் கவனஞ் செலுத்த வேண்டுகிறேன்."

* The hon. the PRESIDENT :—" The question is to reduce the allotment of Rs. 18,400 for Pay of officers by Rs. 100.

" The Council will now adjourn and re-assemble to-morrow at 11 o'clock."

IV

PAPER LAID ON THE TABLE OF THE HOUSE.

G.O. No. 246,[a] Revenue, dated 8th February 1930, recording Mr. Munro's Report on the Development of Agriculture in the Agency tracts.

R. V. KRISHNA AYYAR,
Secretary to the Legislative Council.



[a] Printed as Appendix III at pages 681—715 infra.

APPENDIX I.

[Vide answer to question No. 1651 asked by Mr. J. A. Saldanha at the meeting of the Legislative Council held on the 27th March 1930, page 616 supra.]

Statement showing the latest developments in the Indianization of the Superior Civil Services in the Madras Presidency.

Superior Civil Services dealt with by the Lee Commission.	Latest developments.	Percentage of Indians on 1st January 1929. Number of Europeans.	1st January 1929. Number of Indians.	1st January 1929. Percentage.	1st January 1930. Number of Europeans.	1st January 1930. Number of Indians.	1st January 1930. Percentage.
Indian Civil Service	The recommendations were accepted and are now being carried out ..	115	59*	34	113	66*	37
Indian Police Service	Do. do. ..	62	12	16	60	13	18
Indian Forest Service	The orders of the Secretary of State have not yet been received ..	34	22	39	34	24	41
Indian Service of Engineers ..	The rate of recruitment to the service has been fixed by the Secretary of State at 33 per cent Europeans, 45 per cent directly recruited Indians and 22 per cent officers promoted from the Madras Engineering Service. Recruitment is made by him accordingly.	43	34	44	41	34	45
Indian Agricultural Service ..	There is no recruitment to these services	6	8	57	6	8	57
Indian Veterinary Service ..		3	1	25	3	1	25
Indian Educational Service—							
Men's Branch		14	17	55	13	16	55
Women's Branch		5	3	38	4	3	43
Indian Medical Service	According to a scheme sanctioned by the Secretary of State, the Indian Medical Service constituted on the same broad lines as at present will be retained primarily to meet the needs of the Indian Army. In order to maintain the necessary minimum war reserve of military medical officers and to provide European medical attendance for European officers of the Superior Civil Services and their families Local Governments are required to employ a stated number of Indian Medical Service officers. The number of civil appointments to be reserved in Madras for Indian Medical Service officers is 23. The question of Indianization does not therefore arise in this service.	..	..	..	..	..	..

* Including listed posts.

APPENDIX II.

[Vide answer to question No. 1656 asked by Mr. A. B. Shetty at the meeting of the Legislative Council held on the 27th March 1930, page 619 supra.]

Findings of the Conference of Gazetted Officers of the Agricultural Department held in January 1930.

Demonstration areas and plots.—(*a*) The term 'demonstration plots' should be reserved for use in connexion with those plots which are intended to demonstrate the advantage of an innovation of any sort, which has been thoroughly tested and found to be sound.

The 'demonstration plot' should consist of two strips placed side by side in the same field. One plot will be 'treated' according to the item to be demonstrated. The other plot will be 'untreated'. The strips may vary in size from 1 to ½ an acre.

Demonstrators will take all necessary precautions to see that the demonstration is given a fair chance of success, but need not weigh the produce of the two strips. Demonstrations should always be carried out with the *active* co-operation of the interested cultivator.

Demonstration plots should never be used to obtain information as to the effect of a 'treatment.' Information of this nature should be obtained from 'trial plots.'

The terms 'demonstration farm' and 'demonstration areas' should cease to be used.

(*b*) *Trial plots.*—This term should be reserved for strip tests of any innovation carried out under cultivator's conditions. No innovation should be tried out under cultivator's conditions until it has first been tested on the nearest research station and has been found to show distinct promise of success. No innovation should be recommended to cultivators until it has been tested under cultivator's conditions and has been found to be satisfactory.

The normal arrangement of the strips in a trial plot will be A. B. B. A. The size of the strip may vary from 5 to 10 cents according to the innovation being tested.

The test will be carried out with the same rigorous attention to detail and care in recording results as is given on the research stations.

Demonstrators will not ordinarily be expected to manage 'trial plots'. This should normally be the duty of an officer from the research station deputed for the purpose. The district staff, however, will collaborate in making arrangements for the test to be conducted.

2. *Agricultural demonstrators*—(*a*) *Jurisdiction.*—The ratio already fixed of one taluk per demonstrator will continue unchanged. As, however, the number of villages per taluk is 100 or more and as the demonstrator cannot be on tour for more than 20 days a month on the average, he should not attempt to visit every village every year.

The taluk should be divided into not less than three areas. In each area one village should be selected to serve as a centre. At this centre the demonstrator will arrange for demonstration plots, and will endeavour to get the cultivators from the other villages in the area to visit the centre.

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Demonstration will continue at these centres until it is evident that the cultivators have grasped the ideas when a move to a new village in the area will be made and the process continued.

(*b*) *Depots.*—If depots have to be maintained by the department, they should be kept open regularly on all working days so that ryots may know that whenever they come to the depot on a working day their wants will receive attention. It is useless to run a depot which is open for an irregular number of days at irregular intervals when the demonstrator happens to be at headquarters. Every depot maintained by the Department should therefore have a regular attendant capable of maintaining proper accounts.

In order to minimise the number of such attendants that will be required and in order to free the demonstrator from office work which militates against his exercising his proper functions, the plan of maintaining a central depot at the headquarters of the District Agricultural Officer to supply agents in the villages should be tried. The central depot should be in the charge of a storekeeper on the ordinary clerk's pay of Rs. 35 to Rs. 60, who should be required to give security. The agents in the villages should be private individuals of known probity or organization like co-operative societies, village panchayats or village agricultural associations.

(*c*) *Show-rooms.*—Every District Agricultural Officer should have a well equipped show-room at his headquarters. Here will be maintained a range of posters and exhibits dealing with items of propaganda of use in the particular district and leaflets and literature for distribution. The posters and exhibits should be kept fresh and up to date and the collection should be as interesting and instructive as possible. It should never be allowed to get musty, flyblown and lifeless in appearance.

(*d*) *Training of demonstrators.*—All new recruits should be on probation for three years. They should be posted first to a research station and should be kept there for one year. At the end of that time it should be apparent whether they are better fitted for research or demonstration. During the second year they will continue to work on the station if deemed better fitted for research or if considered to be better fitted for demonstration work will be sent to work under an experienced demonstrator. During the third year they will be given independent work to do, and will be confirmed if this is done satisfactorily. Any officer who shows that he is not likely to be useful in either capacity should not be kept on after this has been discovered even if his probationary period is not completed.

(*e*) *Reduction of office work.*—Agricultural demonstrators are burdened with an excessive amount of office work which seriously affects their efficiency as demonstrators. The main items responsible for this state of affairs are :—

(*a*) Depots,
(*b*) Wages and batta of messengers,
(*c*) Pay and travelling allowance of maistris,
(*d*) Their own travelling allowance bills, and
(*e*) Weekly diaries.

(*a*) The cure here is to relieve the demonstrators of the charge of depots altogether.

(*b*) Although the demonstrator needs a messenger continuously and although it is obvious that an experienced man is more useful even as a messenger than an inexperienced man, messengers are treated as casual coolies and are paid as such. This necessitates the preparation of vouchers

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involving a number of calculations which wastes a great deal of time and the periodical discharge and reappointment of the messenger with further waste of time when a new man is employed. All this can be avoided if messengers are employed on monthly wages, as temporary peons are paid the same monthly rate of pay as peons and a fixed travelling allowance of Rs. 5 per month.

(c) In this case and in the next (d) the preparation of the travelling allowance bills is a waste of time. Both maistris and demonstrators have to be on tour for 20 days in the month and in both cases a fixed travelling allowance would avoid the necessity of preparing bills and would not raise the expenditure under this head. The rates suggested are Rs. 10 for maistris. The rates for the lower and upper subordinates will have to be worked out, but will probably range about Rs. 30 for the former and Rs. 45 for the latter.

(e) This should be written up day by day, instead of at the end of the week as at present. The forms used for the purpose should be ruled, perforated and bound. A copying ink pencil should be used for writing the original which should be sent to the District Agricultural Officer regularly once a week.

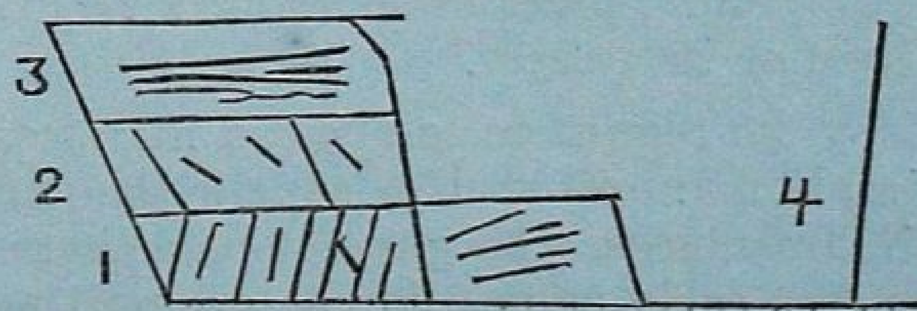
3. *Maistris*—(*a*) *Training.*—Maistris should be recruited from a cultivating class and should be trained on the research station nearest to the area in which he is employed.

(*b*) *Number required.*—For the present each demonstrator should have one maistri.

(*c*) *Pay.*—There should be two grades only, viz., Rs. 20—1—25 and Rs. 25—1—30.

4. *General items of propaganda.*—There are certain items of propaganda which are not specific to particular tracts but are of general application. These items every demonstrator should endeavour to push in season and out of season. These items are :—

(*a*) *Proper method of manufacture of cattle manure.*—The basic idea here is that the cattle should be stalled in some form of a loose box not very deep—one foot depth will do—with a hard floor. On this floor dry earth should be spread to a depth of about six inches. On this such litter as is available should be spread daily, before the cattle are stalled at night. Cultivators should be advised to chop their dry fodder into lengths of about four inches and to spread refuse fodder and such other organic matter as can be so used in the cattle stalls. Green leaf is very useful for this purpose but it should not be used in wet weather or when the cattle have to remain in the stalls all day, as in such circumstances the bed of the stall gets very miry. When the depth of material in the stalls has increased to one foot, the organic matter and dung and a certain amount of the earth should be removed and put in a pit neatly, not just thrown in anyhow, and should be covered with earth. The earth left in the stall should be stirred up and fresh earth added to make up for the earth removed and the process repeated. As each lot of manure is removed from the stall to the pit it should be put on top of the last lot until that section of the pit is filled when a new section will be started—see sketch.



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(b) *Manufacture of compost.*—Organic matter should not be burnt. Such of it as can be used as litter in the cattle-sheds should be used there. The rest should be pitted in the manner described in the Villagers' Calendar.

(c) *Proper preservation of night-soil.*—Wherever possible this should be encouraged and the possibility of using bore-hole latrines should be investigated.

(d) *Field management*—

(1) Clean cultivation to eradicate all weeds.

(2) Mulching to preserve moisture.

(3) Ploughing or cultivation as soon as the crop is harvested. There should be no long interval between harvest and this operation.

(4) Deep cultivation if a pan is to be broken.

(5) Levelling of fields.

(6) Enlargement of fields, consolidation of holdings.

(7) Forming bunds.

(e) *Rotation of crops.*—The existing rotations in each circle should be examined and suggestions made for improving on these. Further action will depend on these reports.

(f) *Preservation of seed.*—Methods in vogue should be examined and reported upon.

(g) *Maintenance of cattle.*—Need for care in housing and feeding should be emphasized.

The possibilities of growing fodder crops, e.g., sunnhemp, cholam and cumbu, should be examined and discussed with cultivators who should be encouraged to do this wherever possible. Where the conditions are favourable for the making of silage, e.g., on the West Coast, the possibilities of this form of fodder preservation should be announced.

All owners of cattle should be advised to use oil-cake for feeding their cattle.

Every village should have at least one good breeding bull of the breed suitable to the locality.

5. *Specific items of propaganda*—(a) Manures—

(1) *Paddy.*—The general plan of manuring for this crop should be green manure, sulphate of ammonia and a phosphatic manure, e.g., bone-meal, ordinary supers or concentrated supers. About 4,000 lb. of green manure per acre, one bag of sulphate of ammonia and one or one and a half bags of ordinary supers appears to be a fair dressing for paddy.

(2) *Sugarcane.*—The optimum dose of nitrogen for this crop appears to be about 100 lb. Part of this nitrogen, about two-thirds, should be in the form of oil-cake. The remainder may be in the form of sulphate of ammonia, phosphatic manure to give 30 to 50 lb. P_2O_5 may be applied direct or indirectly.

In regard to compound manures such as ammophos as compared with simple manures such as supers, the choice of manure to be used depends on circumstances. In general phosphatic manures should be turned into the land as early as possible before putting in the crop. Where it is desired to apply nitrogen at a specific time during the growing of the crop compound

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manures cannot be used, but where the time of application of the nitrogen can be the same as that of the P_2O_5 then a compound manure has distinct advantages.

(*b*) *Methods of cultivation*—

(i) *Paddy*.—Thin sowing of seed-beds as before, to be advocated.

(ii) *Sugarcane*.—Line planting is better than broadcasting of setts. The distance from line to line should be 3 feet and the rate of sowing should be about 12,000 setts per acre. The use of crude oil emulsion as a preventive of white ant attack should be advertised, as also the wisdom of selecting healthy setts.

The possibility of making use of the 'short planting' system for providing seed canes should be considered in those circles where the practice does not exist.

(iii) *Other crops*.—In general drilling and intercultivation by bullock power should be advocated in preference to broadcasting.

(*c*) *Strains*.—The procedure in regard to the introduction of new strains into a district is to be that outlined under "trial plots". The Superintendent of the Research Station or the Crop Specialist as the case may be will maintain stocks of seed of strains undergoing test on trial plots until the test is finished, when if the test gives a favourable result he will hand over as large a quantity as possible to the Deputy Director who will then make his own arrangements for multiplying it. Small lots of pure strain should always be available on the nearest Research station capable of growing the strain in question.

6. *Seed—Increase of supply*—(*a*) *General*.—The sooner the demonstrator is free of the work of supplying seed to the cultivator the better. In all cases the cultivator should be advised, encouraged and shown how to arrange for his own supply. The supply of seed is a very useful means of starting village agricultural associations as it provides at definite purpose for which to work. Every circle should endeavour to get such associations started in the centres discussed under 2 (*a*).

These associations may be formed for any purpose, production of seed, maintenance of a breeding bull or the purchase of plough, etc. They should be registered.

(*b*) *Green manure seeds*.—The following circles can supply the green manure seeds noted against them :—

I Circle	Dhaincha.
II and III Circles	Indigo.
V and VI Circles	Wild indigo.
II Circle	Sunnhemp.

Circle officers requiring seed should apply to the Director of Agriculture in time who will forward the indents to the officer concerned. The supplying officer will call for tenders and having selected a tender will then arrange for the tenderer to supply the seed direct. Supplying officers should inform the Director of Agriculture when supplies are likely to be ready.

(*c*) *Seed-testing*.—There is a need for a central seed-testing establishment. It was decided that the Lecturing Botanist should undertake to do this work.

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7. *Implements—Suitable types—Methods of cheapening prices*—(i) *Ploughs.*—The Director of Agriculture's scheme for stimulating the sale of ploughs was approved, and his proposal to limit the type of ploughs under demonstration to three was adopted.

(ii) *Roll-easy mhote wheel.*—Present attitude to continue.

(iii) The discussion revealed the fact that a really satisfactory mill capable of dealing effectively with both hard and soft canes had not yet been found. Further trial was indicated.

(iv) *Chaffcutter.*—A type of cutter that will cut fodder into 4-inch lengths is required and will have to be devised.

(v) *Mhote buckets.*—Suggestions for improvements are required.

(vi) *Tractors.*—The department should again take up the testing of tractors.

Until we are in a position to advise definitely, commonsense should be used in giving advice to prospective buyers. The main point to see to is that the would-be tractor owner has the prospect of sufficient work to keep the tractor economically employed.

(vii) Types of machines for harvesting, threshing and winnowing at prices within reasonable reach of the cultivator are required.

(viii) District officers should send up suggestions to the Research Engineer.

8. *Pests—Diseases—Live-stock.*—In each circle there should be at least one officer trained by the Deputy Director of Agriculture, Live-stock, to advise on matters connected with live-stock. Similarly there should be one officer trained in plant sanitation in each circle. The latter officer would in all probability be attached to the research station.

On each research station if possible a breeding bull and a certain number of cows should be maintained, sufficient to supply milk to the officers on the station and to rear calves properly.

9. *Exhibition vans, etc.*—(i) Exhibition vans should not be attached to a circle for more than four months at a time. Vans should spend at least three nights at each halting place.

(ii) *Exhibitions.*—There should be at least one good exhibition in the year at an important centre.

(iii) Parties of ryots should be taken to tracts or stations where special methods have to be studied.

(iv) Each district should be provided with a lantern and as the cultivators got tired of seeing the same slides over and over again the range of slides should be widened and new methods of presenting the same idea should be worked out.

As conditions vary from district to district and as it is essential to be able to take advantage of opportunities of obtaining interesting, instructive and effective slides it is necessary that each circle should be provided with a camera and an officer capable of using it and of preparing slides. The same officer can also be usefully employed in keeping exhibits and posters up to date in depots and helping demonstrators with such aids in delivering instructive lectures.

10. *Publications—Revision of leaflets, etc.*—This was agreed upon.

Appendix III.

[Vide Item IV—Paper laid on the table of the House, page 673 supra.]

G.O. No. 246, Revenue, 8th February 1930.

[Agency—Development of Agriculture—Mr. Munro's report—Recorded.]

Read—the following papers :—

I

Letter from R. D. Anstead, Esq., M.A., C.I.E., Director of Agriculture, to the Secretary to Government, Development Department, dated the 19th April 1928, D. Dis. No. D. 722/27.

With reference to G.O. Mis. No. 4, dated 4th January 1928, I have the honour to forward herewith in duplicate a copy of Mr. Munro's report on his visit to the Agency to examine the conditions prevailing there in regard to cultivation of fruit, coffee, potatoes, etc., and the possibilities of the area and the most suitable way in which the Agricultural department can assist in developing it.

2. I venture to think that Government will agree with me that this is a very complete and carefully compiled report and that it reflects great credit on Mr. Munro who has evidently given the matter his most careful attention.

3. It appears to me that any development of the Agency must be along the following lines and in the order named :—

(1) An investigation of the malaria problem by the Medical department and the mitigation of this scourge.

(2) The improvement of education in the primary schools.

(3) The improvement of irrigational facilities.

(4) The improvement of the cattle by posting of Government stud bulls in charge of the Veterinary officers and the systematic castration of other male stock.

4. Until these important matters have been taken in hand and attended to, I do not think the Agricultural department can do anything to develop the Agency. The Agricultural department can only begin its sphere of usefulness when facilities for success and a demand for agricultural knowledge have been created.

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ENCLOSURE.

REPORT ON VISIT TO AGENCY TRACTS DURING FEBRUARY 1928.

(1) AREA.

The Agency tracts of the Ganjam, Vizagapatam and Godavari together cover an area of 19,287 square miles and include the following taluks :—

Ganjam.

(1) Ghumsur-Udayagiri.
(2) Balliguda.
(3) Ramagiri-Udayagiri.
(4) Part of Parlakimedi.

Vizagapatam.

(1) Rayaghada.
(2) Gunupur.
(3) Bissamcuttack.
(4) Koraput.
(5) Jeypore.
(6) Nowrangapur.
(7) Malkanagiri.
(8) Pottangi.
(9) Padwa.
(10) Gudem.

East Godavari.



(1) Polavaram.
(2) Yellavaram.
(3) Chodavaram.
(4) Bhadrachalam.
(5) Nugur.

Total, 19.

In Ganjam, Balliguda and Ghumsur-Udayagiri taluks belong mostly to Government, while Ramagiri-Udayagiri and Parlakimedi are mostly zamindari lands. In Vizagapatam, Jeypore zamindari includes the first nine taluks, while Gudem belongs mainly to Government.

(2) GENERAL FEATURES.

The main feature of the tract as a whole, is the range of the Eastern Ghats, which roughly traverses it from north to south. The elevation varies considerably, in G. Udayagiri and Balliguda taluks, in the north, it runs about 2,000 feet, drops further south to about 1,000 feet and rises in Ramagiri-Udayagiri to a general level of 3,000 feet. The Chokapad Khandam on the north-east corner is a small plateau by itself of about 1,000 feet mean elevation. In Vizagapatam, the 3,000 feet plateau includes Pottangi, Padwa and Koraput, while Gudem is about the same elevation or slightly lower. Near Salur and to the south, the eastern side drops abruptly to the plains. Further to the north Bissamcuttack, Gunupur, and Rayaghada are about 1,000—2,000 feet. On the western side, there is a fairly abrupt drop to the 2,000 feet plateau, which includes Jeypore and Nowrangapur and extends south-west until it runs into the 1,000 feet plateau, which includes most of Malkanagiri taluk.

For the greater part, the country is hilly with varying sizes of valleys between. Near Pottangi on the 3,000 feet plateau to the east of Sembliguda, there is a range of hills, the highest peak of which rises to 5,815 feet. Proposals are being considered for the formation of a hill station there.

Rivers.—The line of ghats forms the main watershed between the catchment area of the Godavari and the Mahendra Tanya, the Vamasadhara and the Nagavalli, which flow through the Vizagapatam and Ganjam districts. Along the north-east boundary of the Nowrangapur and Koraput taluks, runs another watershed separating the basins of the Godavari and Mahanadi rivers. Besides the Godavari, which flows along the western boundary of the Nugur and Bhadrachalam taluks and leaves the Agency near Polavaram, there are other rivers of considerable size, e.g., Indravati, Saveri and Sileru, which are perennial.

These rivers are fed by masses of small tributaries rising on the hills and flowing through the valleys. Some of them are perennial while others are purely rain-fed and dry up in the hot weather. Of the perennial ones, many are fed during the dry weather from springs on the hill sides. A very good example of such springs is that afforded by the one found at Bodigumma near Lingagodo, where the straw-berries grow. Such springs are known all through hills and are recognized as drinking places for wild animals. Water-supplies for the inhabitants and live-stock of the plateaus are mainly obtained from these perennial streams, but well-boring for water has also been carried out. At Ghumsur-Udayagiri village, water is found about 30—40 feet below ground-level even in dry weather; while in a boring further up the hill, 20 feet of water was found in a 70 feet boring.

In some instances these streams are used for flow irrigation and to a small extent for pot-watering and piccotah work; but the total percentage of water used for irrigation work of any sort is comparatively small. Probably the Savaras in the south of the Ganjam Agency, are the most expert of all tribes in the work of terracing and utilization of streams for flow irrigation. In many cases irrigation water could be stored by a system of tanks. These tanks, however, to be constructed cheaply enough and to hold the water at a sufficiently high level for flow irrigation, would have to be built in the hills. Once the streams reach the valley, deep river-beds are formed in the deep loamy soils there and to bund these to raise the water sufficiently high for irrigation purposes, would cost a considerable amount of money. These low-lying, slow-running streams seem to be responsible for much of the malaria in the district, but to straighten up the channels to ensure a quicker flow and reasonable drip-feed kerosene arrangements, would cost unlimited money. A good example is Koraput stream near the Jail, which was a known defaulter in this respect. Recently it was straightened up, revetted, and packed, and the trouble with mosquitoes has been largely overcome. These facts are mentioned in order to show that while there is a considerable amount of water available, difficulties are found in the way of its efficient use; while the tackling of malaria, which is largely responsible for the lack of sufficient men and capital for development, is also beset with difficulties.

(3) Forests.

A considerable part of the Agency is covered with jungle, which in some cases, consists of magnificent forest and in other cases of scrub. A considerable area of this scrub jungle is used every few years for podu, Kumeri, or shifting cultivation. In some cases, notably on the 3,000 feet plateau between Koraput and Pottangi, the hills are practically bare of even scrub

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jungle and many of the hills when not cultivated, grow grass. It is very noticeable when coming from Jeypore on the 2,000 feet plateau up to the 3,000 feet plateau that the steeper areas on the ghat carry fairly good forest. From the top of the ghat from mile 54, the change in the growth is very marked. This area consisting of parts of the Padwa, Koraput and Pottangi taluks, is practically bare of even scrub jungle. Cultivation is carried on the valleys and almost up to the tops of the hills.

In parts of Nowrangpur and Jeypore, magnificent forests of Shorea Robusta are found and these will, when the country is more opened up by railways and roads, give work to a considerable number of men and bullocks in transport. In the southern part of the Agency, teak is found in fairly large quantity. Other trees of importance are—*Terminalia tomentosa, Xylia dolabriformis, Pterocarpus marsupium, Chloroxylon swietenia, Drospyros melonoxylon, and Dalbergia latifolia.*

Sandalwood is also found in places and has been introduced into others. Forest conservation is receiving more attention and the extraction of valuable timbers therefore is a proposition, which will probably rise to greater volume as transport facilities to the markets increase and an increasing number of men and bullocks or buffaloes will be used in short distance carting to rail heads.

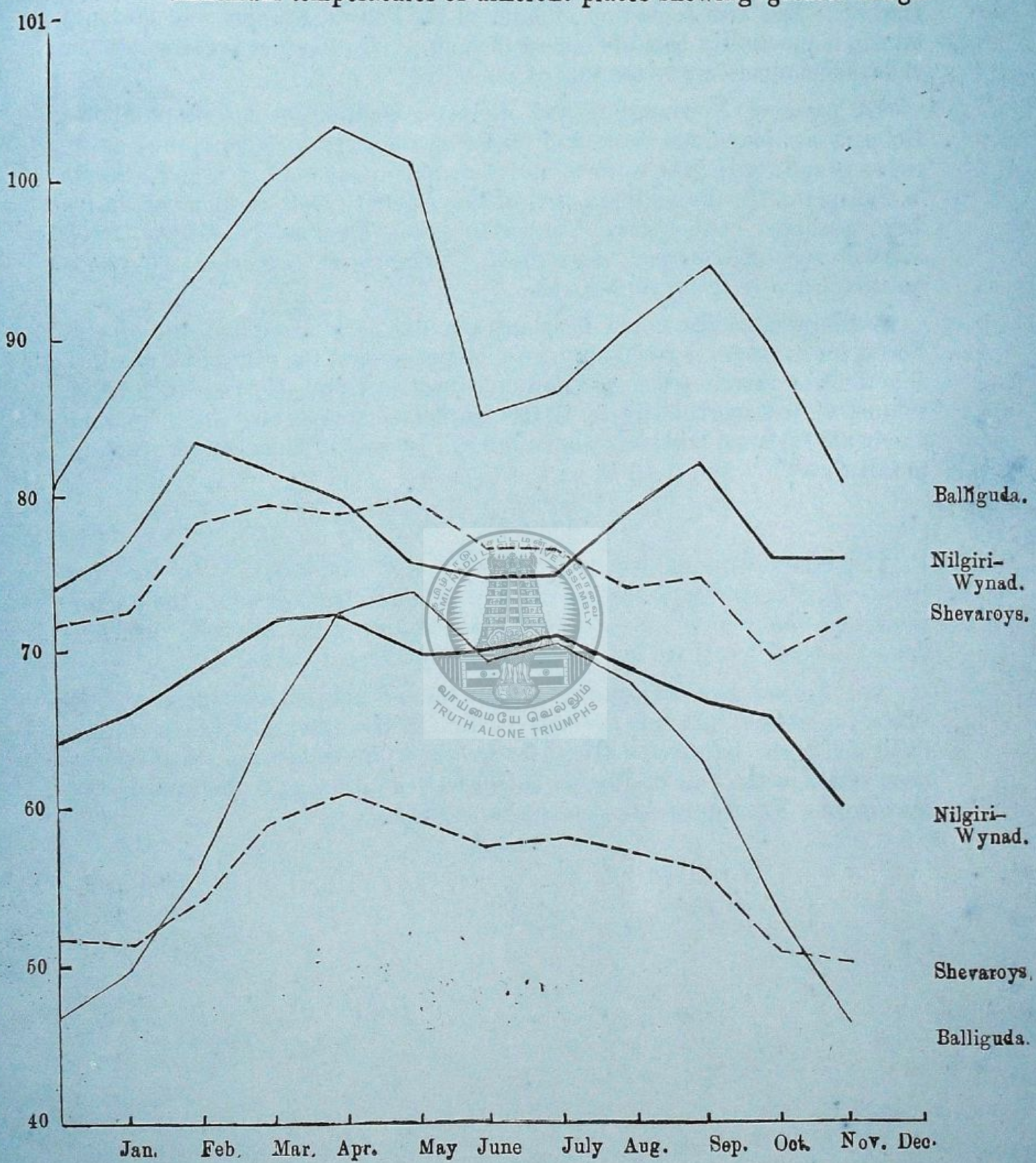
(4) CLIMATE.

The climate in the Agency varies very considerably. In the low elevations, it is similar to that of the plains adjoining, while in the higher elevations, the nights are cool even in the hottest of hot weather. During the cold season, frosts are not uncommon in the higher elevations.

(*a*) *Temperature.*—Figures of maximum and minimum temperatures are difficult to obtain, but the average Balliguda (Ganjam district) elevation about 2,000 feet, figures for five years are shown for comparison with figures of an estate in the Nilgiri-Wynad, 3,000 feet elevation, and Yercaud in the Shevaroys. The figures are also shown as graphs.

Maximum temperatures of different places to show the high temperatures ranging in the Agency tracts.

Minimum temperatures of different places showing greater range.



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Maximum and minimum temperatures.

—	Maximum.			Minimum.		
	Balliguda.	Yercaud.	Nilgiri-Wynad.	Balliguda.	Yercaud.	Nilgiri-Wynad.
January	80·4	71·6	74	46·4	51·8	64
February	87·5	72·5	77	49·7	51·2	66
March	93·6	77·9	83	56·5	54·7	69
April	100·2	79·2	82	65·6	59·0	72
May	103·7	79	80	72·4	60·9	72
June	101 5	79·7	76	73·7	59·4	70
July	85·1	77	75	69·8	57·2	70
August	86·4	77	75	70·7	57·6	71
September	90·3	73·6	79	68·0	56·7	69
October	94·6	74·7	82	62·9	55·8	67
November	89·3	69·8	76	53·3	51·0	66
December	80·9	71·6	76	46·4	50·0	60

(*b*) *Rainfall*—(1) *Total average.*—The rainfall in the districts varies—Ganjam and Vizagapatam having an almost equal average rainfall, while Godavari is 8 inches lower. Figures are given below :—

Ganjam district.

Average for the Agency tracts ... ... 59·93

Above average.		Below average.	
Balliguda ...	64·17	Dharingabadi ...	56·44
R. Udayagiri ...	63·68	G. Udayagiri ...	58·51
(Ramagiri) ...	...	Gumma	56·84

Vizagapatam district.

Average for the Agency tracts ... ... 59·85

Above average.		Below average.	
Nowrangapur ...	65·55	Padwa	59·36
Jeypore	75·20	Rayaghada ...	47·32
Koraput	63·58	Bissamcuttack ...	51·89
Malkanagiri ...	65·69	Gunupur ...	48·30
Pottangi	61·76		

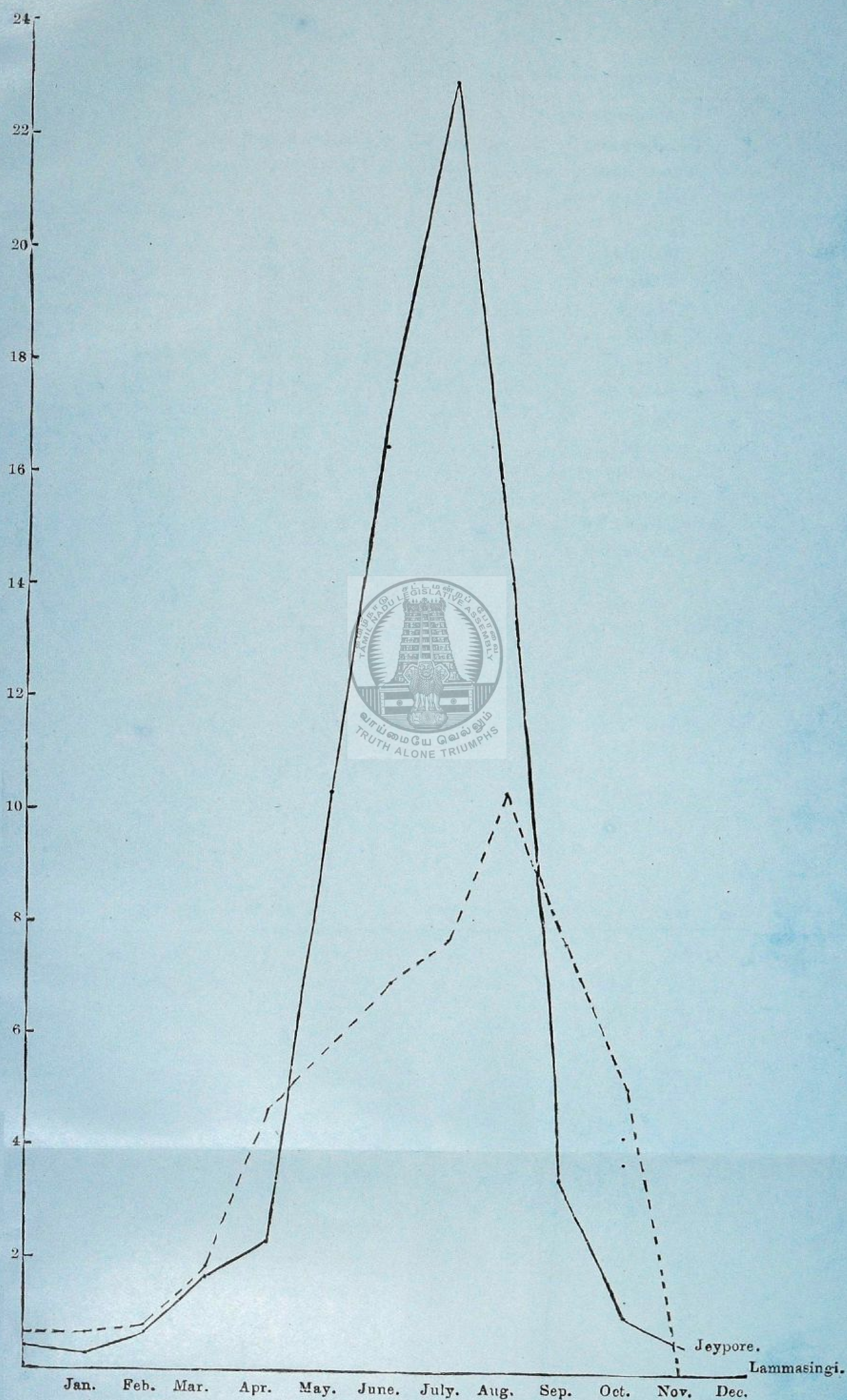
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East Godavari district.

Average for the Agency tracts ... ... 51·80

Above average.		Below average.	
Chodavaram ...	56·03	Bhadrachalam ...	44·92
Yellavaram ...	53·75	Polavaram ...	50·09
Venkatapuram ...	54·23		

	Jeypore.	Lammasingi.
January	0·35	0·64
February	0·26	0·61
March	0·65	0·68
April	1·68	1·74
May	2·25	4·54
June	10·37	4·88
July	17·67	6·89
August	23·22	7·59
September	14·16	10·61
October	3·30	7·51
November	0·79	5·62
December	0·42	0·11
Total ...	75·12	51·70



Graph showing average rainfall of
JEYPORE = Straight line ; LAMMASINGI = Dotted line
24
22
20
18
16
14
12
10
8
6
4
2
Jeypore.
Lammasingi.
Jan.
Feb.
Mar.
Apr.
May.
June.
July.
Aug.
Sep.
Oct.
Nov.
Dec.

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While there is no very great difference in rainfall at the different stations mentioned in the Ganjam Agency, there is considerable variation between those of Vizagapatam Agency due to the configuration of the country.

(2) *Distribution.*—The rainfall brought by the south-west monsoon, during the months of June to September, is heaviest on the western side of the line of ghats but there the rainfall during the north-east monsoon is more scanty. On the other hand the eastern slopes receive less rain during the south-west monsoon, but more during the north-east. The rainfall figures and graphs of Jeypore and Lammasingi shown below make this clear. Jeypore lies on the 2,000 feet plateau, just below the western edge of the Eastern Ghats, where they rise to the 3,000 feet plateau and is practically surrounded by hills to the north and west. These hills largely contribute to its heavy rainfall. Lammasingi is on the eastern edge of the plateau in Gudem taluk and therefore receives more of the north-east monsoon.

It is therefore apparent that although the total amount of rain received on the western side of the ghats is more than on the eastern side, the distribution on the whole is better on the eastern side. In Lammasingi there is an average monthly rainfall of over 4″ for a period of seven months from May to November, while the rainfall at Jeypore registers over this figure for a period of only four months (June to September).

The statement below gives the average monthly distribution of rain at various stations in Ganjam, Vizagapatam and Godavari for the number of years mentioned.

Statement showing the average rainfall from 1906 to 1926 in Ganjam, Vizagapatam and Godavari Agencies.

Months.	Vizagapatam Agency.										
	Jeypore.	Malkanagiri.	Nowrangapur.	Koraput.	Padwa.	Pottangi.	Lammasingi. (A)	Anantagiri. (B)	Rayaghada.	Gunupur.	Bissam-cuttack.
January ..	0·35	0·18	0·35	0·25	0·30	0·28	0·64	1· 4	0·64	0·36	0·42
February ..	0·26	0·17	0·47	0·19	0·15	0·28	0·61	0·10	0·66	1·02	0·66
March ..	0·65	0·19	0·64	0·84	0·51	0·60	0·68	1·01	0·72	0·77	0·94
April ..	1·68	1·71	1·64	1·50	2·60	3·12	1·74	3 00	2·23	2·65	2·21
May ..	2·25	1·72	2·74	2·38	3·68	3·99	4·54	4· 3	2·89	3·16	3·66
June ..	10·37	10·07	9·41	8·28	8·67	8·35	4·88	3· 9	6·98	6·96	7·62
July ..	17·67	18 10	16·23	14·80	12·70	11·09	6·89	4· 9	9·03	9·18	10 46
August ..	23·22	19·43	20·28	18·77	14·49	13·40	7·59	4· 1	10·93	10·41	12·55
September ..	14·16	10·88	9·45	10·98	10·49	11·27	10·41	8· 4	8·37	8·52	8·49
October ..	3·30	3·43	2·97	3·06	4·05	6·86	7·51	5· 6	3·61	3·65	3·49
November ..	0·79	0·85	0·85	1·12	1·21	2·50	5·02	2· 6	0·99	1·31	1·28
December ..	0·42	0·14	0·45	0·41	0·47	0·56	0·11	..	0·28	0·34	0·46

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Months.	Ganjam Agency.					Godavary Agency.				
	Dharingabadi.	Balliguda.	Udayagiri.	Ramagiri.	Gumma.	Polavaram.	Chodavaram.	Yellavaram.	Venkatapuram. (C)	Bhadrachalam.
January ..	0·45	0·57	0·71	0·47	0·41	0·44	0·56	0·58	0·41	0·34
February ..	0·55	0·81	0·86	1·02	0·79	0·31	0·47	0·52	0·52	0·26
March ..	0·81	0·79	1·19	1·15	0·75	0·46	0·95	0·79	0·52	0·42
April ..	2·05	1·47	2·47	2·66	2·22	2·45	1·84	3·27	0·93	1·35
May ..	3·83	2·34	4·26	5·70	3·39	2·66	3·56	3·05	1·76	1·33
June ..	8·95	9·87	8·43	9·34	7·64	7·96	7·50	7·08	6·67	7·55
July ..	11·53	15·35	11·25	11·19	10·49	11·08	10·73	10·02	16·33	11·83
August ..	12·99	16·42	10·63	11·98	12·10	8·27	9·49	9·26	12·58	10·02
September ..	9·22	10·56	10·07	10·65	10·58	7·27	10·25	10·50	9·42	9·82
October ..	5·55	4·36	5·95	6·67	5·92	6·80	7·24	5·79	3·84	3·07
November ..	1·96	0·76	2·08	2·57	2·13	2·29	2·92	2·67	1·12	0·94
December ..	0·45	0·39	0·41	0·28	0·39	0·09	0·50	0·19	0·07	0·36

(A) Average for 13 years from 1915 to 1927.
(B) Average for 7 years only from 1921 to 1927.
(C) For 14 years only.

Jeypore, Malkanagiri and Nowrangapur on the 2,000 feet and 1,000 feet plateaus have all a similar rainfall distribution, while Koraput near the western side of the 3,000 feet plateau is very similar. Further east, Padwa, and Pottangi rainfall is better distributed, each having five months in the year with over 4″ rainfall. Anantagiri rainfall is low being under 40″ per annum while distribution is similar to that of Lammasingi. Rayaghada, Bissamcuttack and Gunupur on the lower elevations have all a similar rainfall with the greatest amount falling in the June to September period.

In Ganjam Agency the rainfall distribution is more or less similar. Balliguda with a total of 64·17″ per annum has the bulk of its rain from June to October, these five months showing over 4″ rainfall. Next comes Ramagiri with 63·68″, but with a better distribution, six months—May to October—showing a 4″ rainfall per mensem. Udayagiri has also a fairly good distribution and is similar to Ramagiri but with a somewhat smaller total. Dharingabadi and Gumma have a distribution similar to Balliguda, but the total amount is less.

In Godavari Agency, Polavaram, Chodavaram, Yellavaram and Venkatapuram all lie between 50″—60″ total rainfall, while Bhadrachalam totals only 45″. Distribution during the year is very similar to that of the rest of the Agency, the period June-October having the greatest proportion of the rainfall.

Most of the individual rainfalls show that the months of January, February, March and December are practically dry. The average figure shown in these months is the result of comparatively heavy and stray showers, which cannot be depended upon regularly. Rain in April is more certain, but even in this month, these are some years where it is little or none. May is a surer month for rain than April, but even in May in some places, the rainfall is very varied in amount from year to year. November



Photo No. 1.

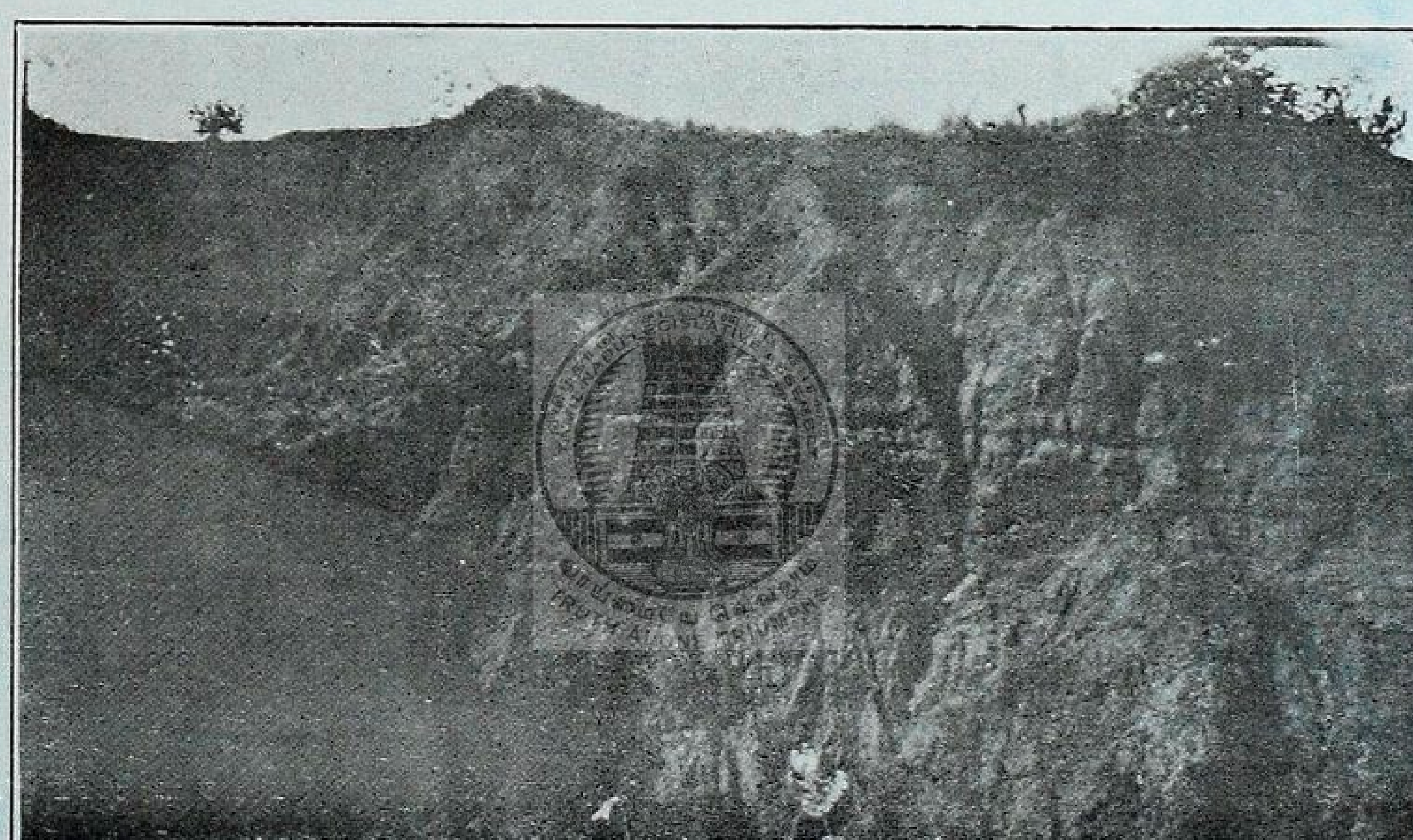


Photo No. 2.



Photo No. 3.

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is also a month of insecure rainfall and although in some years it is comparatively heavy, yet in others there is none or such a small amount as to be of little benefit.

Under these conditions therefore, dry weather can be counted upon during December, January, February and March. The rainfall of April and November is problematical and even May in some years is short. The five months, June to October, are generally reliable from the point of view of rain. This question will be discussed further in connection with the suitability of crops.

(5) Soils.

The soils vary very considerably both in depth and physical properties, but although in cases small areas of black and grey soils appear, the greater portion consists of red loamy sands, and sandy loams which in places incline to gravel and in others to clay.

The hills appear to have been at one time covered with laterite but this laterite layer has now been washed into the valleys filling them up and giving broad and comparatively level areas of cultivable land with hills of various sizes and more or less rocky in appearance standing isolated or in groups. In the centres of the valleys, there is generally found a considerable depth of soil, but towards the hills the depth is less. In each valley one or more small streams wend their way in tortuous courses cut out of the soft soil and the water generally runs at considerable depths below the present ground level. The beds of some of these streams are easily 20 feet below ground level and the sides afford excellent opportunities of studying soil sections.

Photographs (Nos. 1 and 2) showing the stratification of these water-laid valley soils are appended.

Some of these streams have their sources in springs, others again have no definite source but are fed by water oozing out of the sides and bottom of the channels. Some are perennial, while others dry up during the dry weather.

Even in the valley land, however, one is not always certain of the depth of the soil. Outcrops of rocks there are a certain indication that at some distant period that portion had once been a peak, but owing to the filling up of the valleys it is now practically flush with the valley lands. Near outcrops of rock therefore one is almost certain to find that the depth of the soil is less and partially laterised rock is to be found at no far distance below ground level. I append a photograph (No. 3) showing laterised rock in a shallow pit dug at the roadside for road material near G. Udayagiri. Photo No. 1 was taken only about 100 yards away. The soil surface on the top was even and unbroken, and had a gentle slope towards the river where No. 1 photo was taken.

The soil on the hillside is generally thin. It either overlies slab rock or is covered with boulders of various sizes. Where the hillsides are not under podu, or shifting cultivation, there is a growth of jungle, some of which is fairly good forest and the remainder merely scrub and grass. In parts of Koraput, Pottangi and Padwa, there is very little jungle on the hillsides at all and the country looks very bare. In most other parts, jungle of sorts makes a start until the hillman thinks that the soil has sufficiently recovered from former cultivation and wash. When this point is reached, the scrub is cut and burnt and the land cultivated for a year or two until such time as

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the yield of crop decreases to such an extent as to make it unprofitable for further cultivation.

The soils are generally light in texture and easily drained. In cases there are layers of gravel which act as very efficient drains. In some cases drainage is too good, especially where perennial crops are grown with a poorly distributed rainfall. Black soils are more clayey and are preferred to red soils for ordinary cultivation purposes, but the area of black soil is comparatively small.

(6) CROPS.

The Agency tracts are rich in the variation of crops, which can be grown. These are enumerated below with short notes on their cultivation :—

(a) *Cereals.*—Paddy, ragi, cholam and small millets like samai.

Paddy is grown in specially levelled and bunded fields. In some cases these fields are situated in the beds of streams and the water of these is used for flow irrigation. Transplanting is in vogue in places and in a few instances two crops are grown per annum. Where only one crop is grown, the fields are allowed to lie under water for the remainder of the year and would appear to give every facility for mosquito breeding.

In the higher paddy fields where no irrigation is given, the fields are bunded to hold up a sufficient amount of rain water to grow the crop. In these 'dry' fields the seed is broadcasted and no transplanting is done. These paddy fields are practically the only places where crops are grown continuously year after year and consequently have to receive all the manure which by design or more often by chance is conserved.

Levelling of the field is done by a small implement called 'kurudu' and, as will be seen from the photographs (Nos. 4 and 5), is made of wood and worked on the same principle as a buck-scraper. The land is first ploughed before being shifted by the 'kurudu'. The photos give an idea of the country round G. Udayagiri.

Ragi, cholam, etc., are grown as dry crops under the prevalent shifting cultivation system.

(b) *Pulses.*—Red-gram, horse-gram, green-gram and beans are all grown dry under the same system as the cereals. No definite rotation of pulses with cereals seems to be followed.

(c) *Industrial and other crops—Tea.*—A small area of tea was growing at Anantagiri, but no effort was made to pluck such leaf as was produced or to manufacture it. I do not consider that under the conditions there any hope of tea becoming commercially successful under such a low rainfall can be held out.

Rubber.—Ceara rubber was found in Jeypore, but no Hevea was seen. At the present time, Hevea is the variety mostly exploited commercially and it is possible that round Jeypore Hevea-growing would stand some chance of success. At the present time, however, the future of the rubber industry is so uncertain that without figures of yield and other data to guide one it is impossible to predict success. If rubber is to be the subject of experimental work, I would strongly advise that all young plants be budded from high-yielding mother-trees. This practice of budding from selected mother-trees is fast becoming the practice in all rubber-producing countries.

Cotton is grown on a small scale in R. Udayagiri taluk at the lower elevations. It is spun by Khond women and woven by Panos, but the



Photo No. 4.

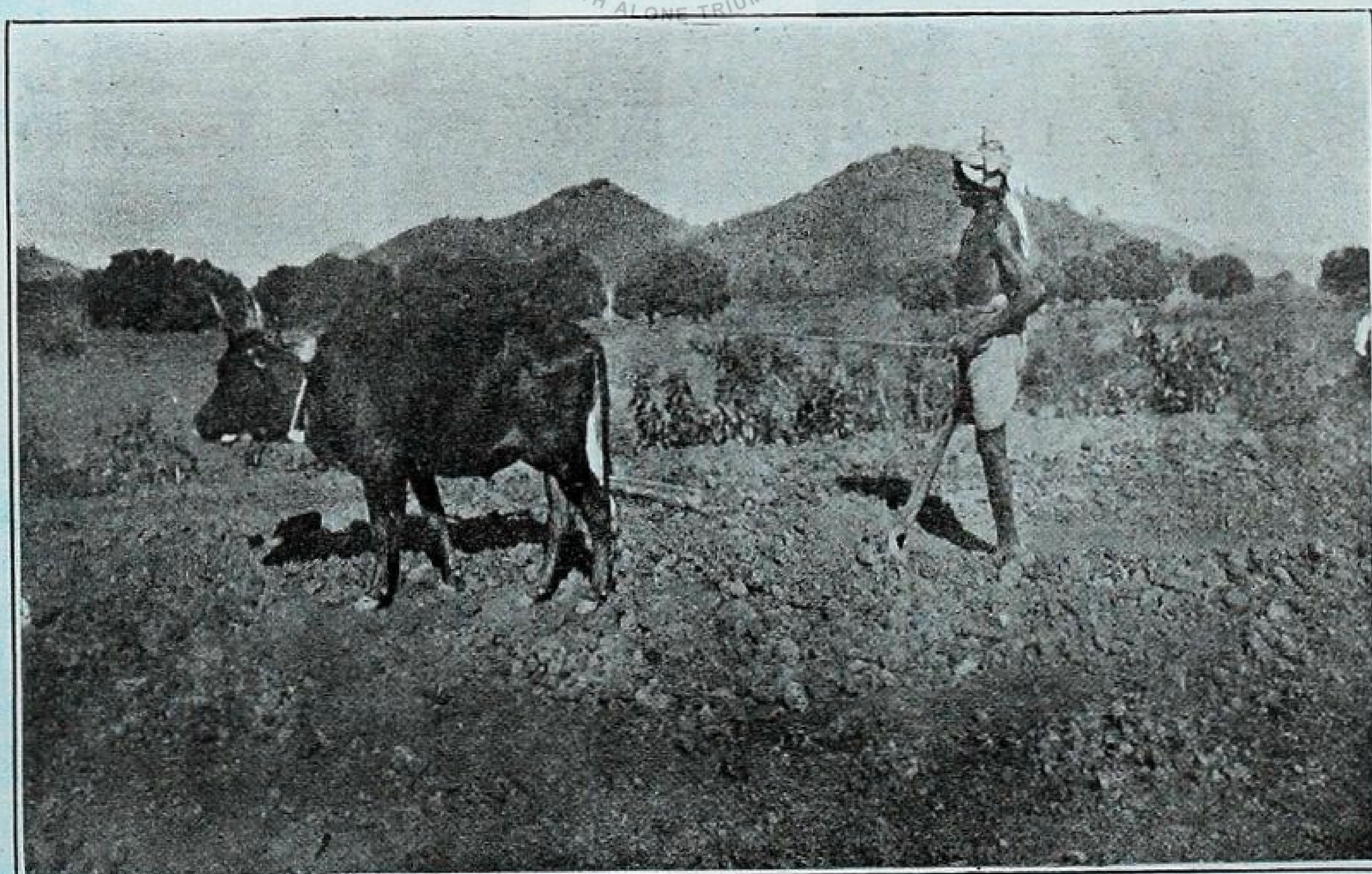


Photo No. 5.

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amount so grown and utilized is said to be small. The large bulk of the yarn used in weaving is imported already spun.

Tobacco is widely distributed and grown mostly for home consumption. Each grower only produces a small quantity to meet local needs and even then tobacco is imported from the plains especially into Ganjam. A good crop was noted near Lammasingi at Rintada.

Arrowroot, ginger and turmeric are also widely grown. The cultivation of turmeric in the Ganjam Agency probably receives more attention than any other crop. It is planted about 9 to 12 inches deep and is covered with a layer of leaves to a depth of 4 to 6 inches. Thus mulch rots away during the rains and during the following dry weather the land is weeded and another mulch of leaves to the same depth as before is applied. At the end of the second year the crop is harvested and sold for export.

Sugarcane is grown only on a small scale. Without irrigation and good manuring this crop cannot be economically grown.

Vegetables.—Potatoes, sweet potatoes, tomatoes, beet, carrots, cabbage, cauliflower, turnips, brinjal, etc., are grown in many gardens, e.g., Anantagiri, Koraput, Jeypore, G. Udayagiri, Balliguda, etc., and with care and attention grow well.

(*d*) *Fruit.*—Oranges, tight and loose skins, limes, lemons, citrons, pomelos are all grown in various places. Peaches, plums, mangoes, jack, guava, custard apple, fig (a ficus boxburgh was seen at Balliguda) are all found. Straw-berries have been planted on Bodigumma hill along with some peach and plum grafts. An apple tree was seen at Anantagiri, but up to the present it has never borne fruit. Coffee was found in various places under estate conditions at Anantagiri and Jeypore and odd groups of trees in several places in Gudem taluk, Anantagiri, G. Udayagiri and Balliguda. Papaya was well distributed, but received little attention. Pine-apples grow well as also do plantains.

(*e*) *Oil-seeds.*—Of the oil-seeds, castor and niger are the most important. Gingelly and mustard are also found, the latter on a comparatively large scale in isolated places. Groundnut has been introduced just recently in G. Udayagiri and good crops were obtained last year. The soil over the greater part of the district is suitable for this crop.

(*f*) *Other products.*—Silk cotton trees (*Bombax malabaricum*) are found in varying numbers and scattered through the forests. The produce is collected where possible. The produce of mahwa and illupai is collected and used. A camphor tree was seen at Anantagiri and I was informed by the Agent to the Governor in Vizagapatam that this particular tree produces seed, and that young seedlings were found in the coffee near by. I did not observe this, but it should be investigated if anyone takes up the growing and preparation of camphor. Annato was found near Jeypore, also cashew-nuts. Myrabolams form a large item of export, as also tamarind. Lac was being experimented with at Jeypore.

It will be seen from the above list of crops and produce that the Agency is rich in the multiplicity and variety of crops which can be grown, and I shall now endeavour to work out the economic possibilities of coffee, fruit and potatoes.

(7) Coffee Arabica.

In dealing with this crop and its suitability for Agency conditions, it is advisable to compare the conditions with those prevailing in other coffee

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districts. The graph No. 3 shows the comparative rainfalls of Suntikoppa, the Shevaroys, Jeypore and Lammasingi. Suntikoppa in Coorg is one of the best, if not the best, coffee district in South India, while the Shevaroys is the coffee district in South India where the rainfall on the whole is lowest.

Jeypore rainfall is comparable with Suntikoppa in amount, but in distribution is somewhat dissimilar. Suntikoppa starts off with more rain than Jeypore in April, May and June and reaches the south-west monsoon peak in July. Jeypore reaches the south-west peak one month later. Being north and east of Coorg, it receives its monsoon later than Suntikoppa by about one month and its season therefore may be taken as later by that period.

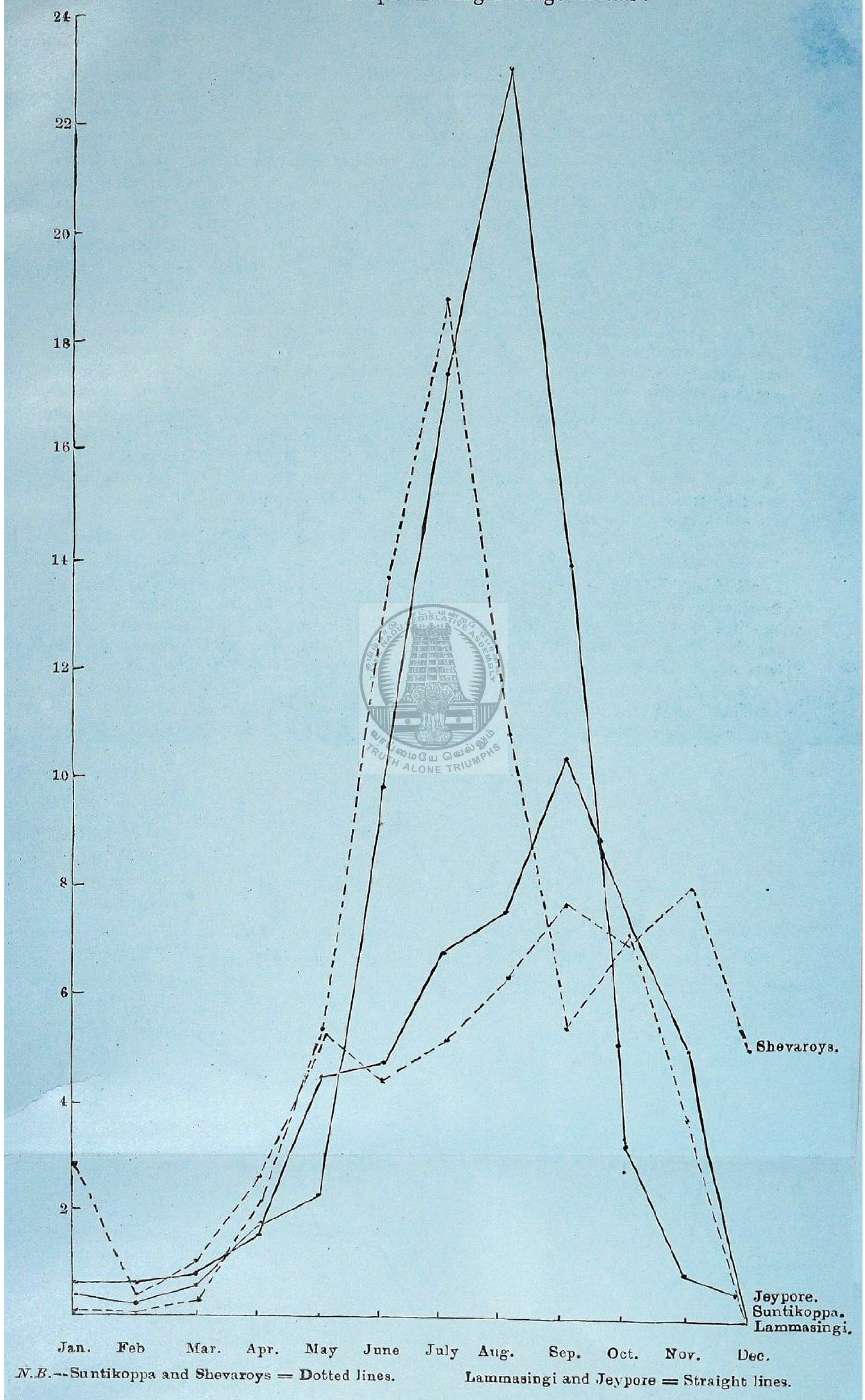
Again, Jeypore being on the western side of the eastern ghats receives less of the north-east monsoon, while Coorg receives a considerable amount of rain during that time. At Suntikoppa, the peak of the north-east monsoon is reached in October, while Jeypore does not receive any considerable amount of rain then.

Comparing the Lammasingi and the Shevaroys rainfalls, which are very similar in total amount, it may be noticed that the only really dry month in the latter district is February. In March, April and May, more rain is received than at Lammasingi. Neither of these places show any definite peak during the south-west monsoon. The north-east monsoon peak in Lammasingi is found in September, while the peak of the north-east in the Shevaroys is found in November. This better distribution of rainfall undoubtedly tends to a longer growing period.

Taking the Jeypore and Lammasingi figures together, there is a distinct tendency towards a shorter period of heavy rainfall during June, July, August and September than is the case with the coffee districts further south. In the latter, the south-west monsoon appears earlier and the north-east continues later than is found in the Agency districts further north.

As relative humidity is one of the important factors in growth, it is apparent that the period of growth in the Agency tracts is shorter than that in the southern districts and therefore the facilities for the production of new wood, on which the coffee crop mainly depends, are less. Not only is this so but a scrutiny of the annual rainfall of Lammasingi shows that droughty years are not uncommon ; for instance in 1920, the rainfall was only 31·70 inches, 1921—45·40 inches and in 1922, it dropped to 24·60 inches. Three such years are bound to materially affect the bushes themselves and the future of any estate.

——	Jeypore.	Suntikoppa.	Lammasingi.	Shevaroys.
January	0·35	0·13	0·64	2·80
February	0·26	0·18	0·61	0·30
March	0·65	0·30	0·68	1·00
April	1·68	2·22	1·74	2·60
May	2·25	5·50	4·54	5·30
June	10·37	13·62	4·88	4·40
July	17·67	19·06	6·89	5·10
August	23·22	10·93	7·59	6·30
September	14·16	5·45	10·41	7·70
October	3·30	7·17	7·51	7·00
November	0·79	3·76	5·02	8·00
December	0·42	0·35	0·11	2·90
	75·12	68·67	51·70	53·40



N.B.—Suntikoppa and Shevaroys = Dotted lines.   Lammasingi and Jeypore = Straight lines.

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Temperature.—A graph of maximum and minimum temperatures for Balliguda, Shevaroys, and the Nilgiri-Wynaad has already been given. It is exceedingly difficult to get a sufficient number of temperature records to give anything like an accurate survey of the Agency tracts, but if Balliguda (2,000 feet elevation) is taken as an example, it is seen that April, May, June maximum temperatures are much higher than those of the Shevaroys.

Temperature as well as humidity plays an important part in conditions for growth and with a higher temperature, one might expect a more rapid rate of growth. At the same time, given an equal amount of rainfall at this period, the higher temperature reduces the relative humidity, which in its turn reacts on growth.

The amount of wood produced on coffee regulates more than any other single factor the amount of possible crop, while conditions appertaining at blossom time and previously limit the actual season's crop. Even if perfect blossom conditions are present, no crop will be obtained unless there is wood to bear it. I am therefore of opinion that as conditions for growth of coffee are not so good in the Agency as they are in the Southern Coffee districts, the crop will not be so successful in the former as in the latter.

Looking at the economic side of the question, I quote figures obtained from the coffee estate at Anantagiri. The biggest crop produced on Anantagiri, was 25 tons of 127 acres after manuring and liming. This works out just on 4 cwt. per acre. This for a bumper crop, is very poor indeed; in fact an estate to be a commercial success, should nearly average this out-turn and I know of estates in Coorg, which have averaged 5—6 cwt. per acre for a period of 10 years. Bumper crops run up to 10—12 cwt. per acre.

For the last five years, Anantagiri estate with 100 acres in bearing averaged about 5 tons parchment per annum, i.e., 1 cwt. per acre. This coffee was sold at Rs. 14 per bushel of 26—28 lb. Taking the bushel as 28 lb., i.e., $\frac{1}{4}$ cwt., the money return per acre amounts to Rs. 56. The present tenant pays Rs. 35 per acre for which amount the estate owner does supply planting, shade work, etc. The tenant does ordinary cultivation, pruning, etc., at a cost of Rs. 30 per acre. The total cost to the tenant therefore is Rs. 65 per acre on 100 acres amounting to Rs. 6,500. In return he receives Rs. 5,600 by way of coffee crop—a loss of Rs. 900. He makes from various fruit trees, oranges, jack, etc., a total sum of about Rs. 1,000 which clears the loss on the coffee. If it were not for other means of subsistence, the tenant could not carry on.

Working expenses and other charges are placed at a ridiculously low figure at Rs. 30 per acre. The total cost of running an up-to-date estate runs from Rs. 120 to Rs. 160 per acre, the latter with heavy manuring. It is therefore apparent that as an economic proposition, this estate does not rank high.

Round Lammasingi at Ebul, Rintada, Kinerla, etc., coffee is grown by the hillmen in small patches of anything up to 100 bushes, and considerable quantities of coffee are produced in good years. Last year was a good year and I am informed that round about Rs. 10,000 worth of coffee came into Narsapatam. Round Anantagiri too, small areas of coffee are found. At G. Udayagiri, there are some trees in one of the official's gardens in the villages as also at Balliguda. Round the guest-house at Jeypore,

excellent coffee trees are found growing as a hedge, but the estate I inspected six miles out from there was a collection of moribund trees from which very little crop could have been taken for years.

I show below a photograph (No. 6) of Arabica at Jeypore. The trees had been cut down two to three years ago to about 3–4 feet above ground-level. New suckers had come away well and an excellent crop was picked last year. It was impossible to get exact information as to the actual amount, but an examination of the older wood showed that it must have been fairly good. This year very little crop at all was picked, while the appearances for crop next year were not too encouraging. The trees in G. Udayagiri were looking well, but as there was little or no crop this year, this is not much to go upon. Prospects for next year, as judged by wood and spike present, were not over encouraging. In both these places the coffee was grown on valley soil of great depth and well-shaded by jack, while most of the coffee in Anantagiri, Jeypore estate and Lammasingi was grown on the poorer and rockier soils of the hill-sides. It would therefore appear that better chances of success follow planting on good deep soil, which is capable of holding moisture well through the dry weather. The absence of leaf disease at Jeypore and G. Udayagari was marked, but stray cases of borer were discovered. In Anantagiri and especially round Lammasingi, considerable damage was done by borer, while leaf disease was rife.

With the exception of Anantagiri estate, which is topped about 4 feet high, all the other coffee seen was high grown under the 'Leaning' system. This system was tried out largely in the Southern Coffee districts and for the first few years gave large crops. As soon as the lower primaries died away, however, and the main stem or stems became exposed, borer got in and large areas of coffee went out of bearing and had to be collar-pruned at ground-level, supplied up, and re-grown on the low single stem system. The very same thing is now happening in the Agency tracts, but instead of being kept low, the bushes are again allowed to grow high and in time they will be again bored. If collar-pruning on a regular system is adopted, a greater supply of young wood could be obtained in the years immediately after pruning with greater resultant crops, but the tree itself will have to be replaced in a shorter time. In this connexion, I would point out that Robusta coffee stands the high method of growing better than Arabica. It is naturally a large growing, heavy cropping tree, it more or less prunes itself, and does not get borer to nearly the same extent as Arabica. While the produce is of inferior quality yet the probable heavier yield should make up for any smaller return in price, and the fact that for the last number of years, about 1,000 tons of such coffee are annually imported into South India, shows that there is no lack of a market for it.

With the above facts in mind, I submit that on the whole there is very little hope of coffee ever becoming a paying proposition under up-to-date estate conditions. The hillman who puts out a few coffee bushes under a jack tree and takes what produce there may be, is in a very different position, as he has no overhead charges and spends practically nothing on maintenance. To him the coffee crop is an extra perquisite, which he takes if there is any, but does not miss very much if there is none. This type of cultivation might be encouraged as any crop harvested is produced at very little cost and favoured spots, which otherwise would remain idle, are utilized.

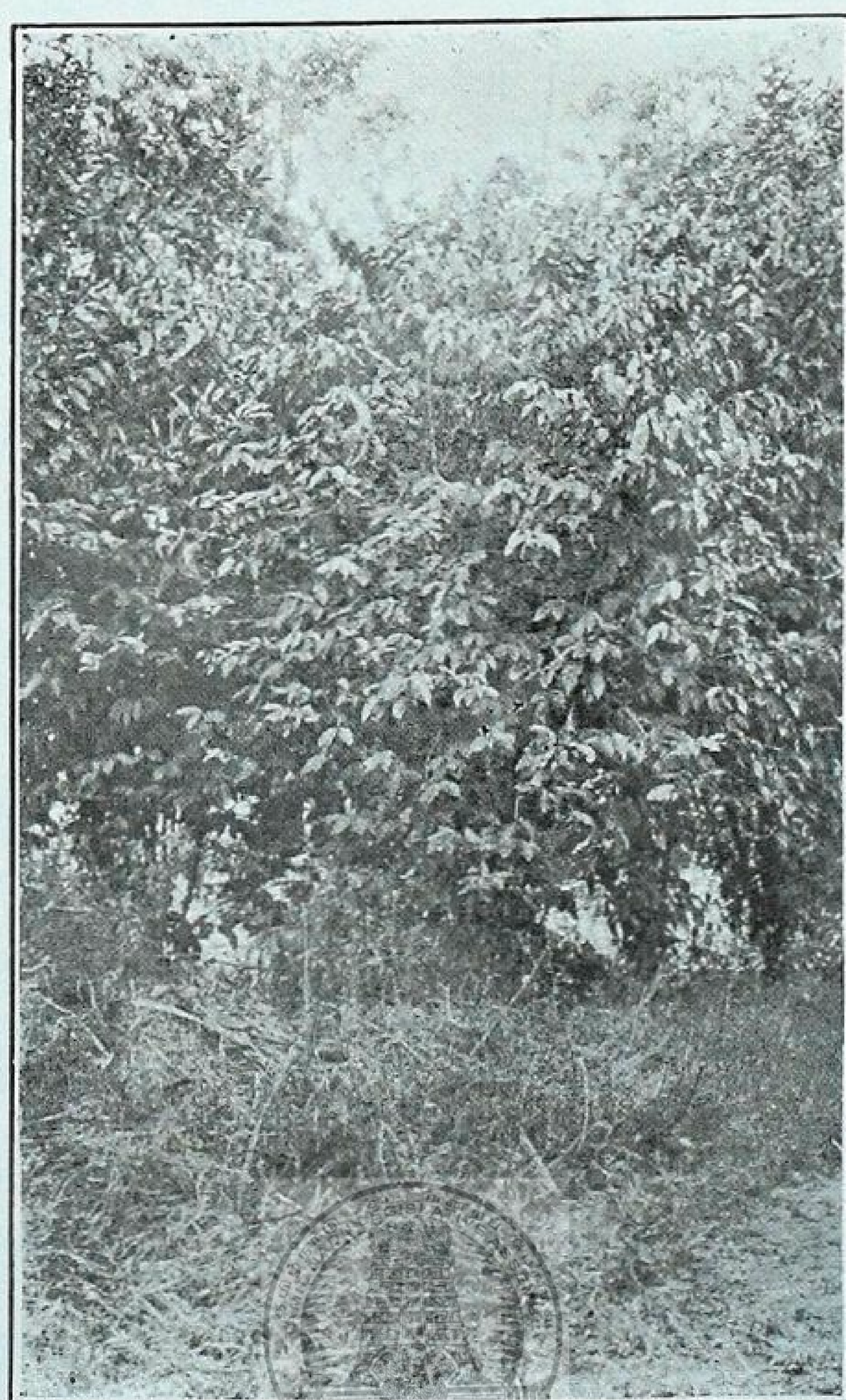


Photo No. 6.



Photo No. 7.

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(8) FRUIT.

(i) *Oranges.*—Oranges and citrus fruits generally are grown all over the Agency tracts. They require a lightish well-drained soil of about 4 feet depth and naturally well-drained Along the water courses in the valley areas, such soils are found and of a much greater depth than 4 feet. The depth of the wet weather water table is also an important factor, for, if the water table rises above the height mentioned for any considerable period of time, then stagnation takes place and the lower roots are affected. The citrus tree develops a well defined taproot which strikes downward into the soil and lateral roots which develop sideways. Early South Africa planters realized that these oranges grow well up to a certain stage and then rapidly declined and died. It was usually discovered that the dead or unthrifty trees had encountered objectionable sub-soils. Similar effects are found with too high a wet weather water table.

I was unfortunately unable to visit the Godavari Agency or the Parlakimedi Maliahs where I understand there is a considerable area under citrus fruits mostly oranges. In the latter district, the cultivators have got the reputation of being good and it is probable that their skill is capable of meeting any demands for increased production, which may arise in the near future. As a matter of fact, I am led to believe that in good seasons there is a glut of oranges on the market at the picking season and it would therefore appear that at present, attention should be paid more to the regulation of supplies and the opening up of new markets to absorb surpluses rather than to aim at increasing the cultivation.

Orange cultivation in the areas visited is not so well developed as it would appear to be in the areas already mentioned. As an instance of the methods in vogue, I may mention one, which I investigated at Rintada near Lammasingi. The total number of trees owned by this man amounted to 120 of the loose-skin variety. They were snugly set in the valley of a small perennial stream and sheltered on all sides planted 12 feet × 12 feet apart which is very close 20 feet × 20 feet would have been none too open.

Pot-watering was done in the dry weather and this is of importance, for, while the hillman may and very often does realize the value of doing a certain operation, he is generally much too slothful to put it into operation. The fact therefore that these oranges were being pot-watered brings to notice the fact that for best results, irrigation is necessary. Investigations in Ganjam also showed that irrigation of some sort is desirable.

The reason for this is not far to seek, the long drought generally experienced from about November-April or May is sufficient to account for it and it is therefore necessary in growing oranges on an estate scale to arrange for irrigation sources before commencing operations.

The orange grower mentioned above, picked five bandy loads averaging about 3,000 oranges each, i.e., a total of 15,000 oranges off his 120 trees or an average of 125 oranges per tree. The outside trees, which had room to spread, were, according to the owner, very much better than the inside ones and yielded 200—300 fruits each, with a corresponding reduction in the number of fruits from the inside ones. My information was that the crop sold at Rs. 2 per 100 or a total income of Rs. 300. This works out at Rs. 25 per mensem. The total area under oranges was under half an acre.

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To get the same return from coffee at Rs. 56 per cwt., a crop of over 5 cwt. per half an acre, i.e., over 10 cwt. per acre would be required. The prospects of oranges therefore at the price mentioned, offer greater possibilities than coffee, but the question of packing and transport is one which requires greater attention and organization.

Prices of the oranges vary considerably from 8 annas per 100 to as high at Rs. 10 per 100. I was informed that at Christmas last year, picked loose-skin oranges cost Rs. 11 per 100, but the crop last year was below normal in that particular area. It is practically impossible to obtain figures as to actual production.

All over, my opinion is, that there is room for the development of the growing of citrus fruits provided marketing is organized. In almost all valleys on the higher plateaus there are small streams along the banks of which small citrus gardens might be planted. The question of irrigation will have to be enquired into if large areas are put down as it would be possible by varying the times of irrigation to control to a certain extent the period of blossoming and the period of fruit picking. By such means the time during which oranges are available, might be considerably lengthened. If, however, each hillman has only a small group of orange and other citrus trees, watering could be done by pots as and when required. Collection of the produce, grading and marketing might be done co-operatively.

As regards other fruits, peaches and plums were found in several places in Vizagapatam and Ganjam. The difficulty with such fruits is that they are more difficult to handle than citrus fruits and at the present stage of development, it would undoubtedly be difficult to get them marketed before they have lost their bloom.

(ii) *Mango*—is the most common fruit found in the hills. Large areas are under seedling mangoes but very few grafts are found. I was led to understand that certain graft trees tried near Lammasingi fruited about August. If this is so, prospects for these are good as they would appear on the market when other sorts are almost impossible to obtain. Here again, however, the prospect is limited owing to transport and it would be only in such places as Lammasingi, which is comparatively near the plains and railway communications that possibilities exist.

(iii) *Pine-apples*—grow well and their cultivation could be improved and intensified especially in places near the plains and markets.

(v) *Straw-berries.*—A small plot of straw-berries was laid down at Bodigumma hill with the object, it is stated, of supplying Calcutta. Bodigumma is two miles from Lingagoda which is seven miles from G. Udayagiri. From there to Russellkonda is 27 miles including the Ghat road. From Russellkonda to Berhampur, the nearest railway station, is 50 miles, a total of 86 miles—a considerable mileage of which consists of walking tracks and ghat road. I consider this scheme almost impossible of execution in an economical way.

I submit therefore that only citrus fruits are worthy of particular attention, under the existing conditions, with the possible addition of mangoes if the fruit ripens at such a time that a high price can be obtained to pay for the extra cost of transport.

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No mention has been made of pests and diseases. Several borer holes were noticed in some orange trees while die-back of tips was found all over the district. Such die-back is most probably due to mildew attacks, but it was impossible at the time of my visit to state its cause definitely. I would point out, however, the possibilities of increase of pests and disease if large areas are laid down to any particular crop.

(9) POTATOES.

In potatoes we come to an annual crop, which has definite possibilities under the conditions of climate and soil. The best sample I saw was at Koraput Jail, where night-soil is largely used in the production of vegetables of many kinds for the use of the prisoners. At all other places, where samples were inspected, the size was small. At Jeypore, Chatrapur, G Udayagiri and Koinjore, the potatoes were small in size and were in many cases badly damaged by a grub of some kind. Specimens of this grub were not obtained but malis and others informed me of it, while its depredations were evident on the tubers. It may possibly be the grub of the potato moth, but this, I may say, is only my opinion and requires investigation Holes about the size of No. 4 shot were bored in some cases right through the potato allowing the entrance of white-ants, which in themselves may do a considerable amount of damage.

Yields run about 4 or 5 fold to one. Out of $1\frac{1}{2}$ bags planted at Koraput with seed from the Government Potato Farm at Nanjanaad (11 miles from Ootacamund), $7\frac{1}{2}$ bags were harvested. Yields at G. Udayagiri were about 4 to 1. It is evident that if yields are to be increased, the cultivation and manuring must be more intensive than at present. At the same time, the question of transport of manures and transport of potatoes produced has to be borne in mind. Potatoes require an acid soil and respond to heavy manuring. A dressing of 10 tons cattle manure plus 4 cwt. fine bone meal plus about 5 cwt. wood ashes per acre should be useful and economical. Bones are available in plenty in the district and if collected in centres, disintegrated, could be supplied to cultivators at reasonable rates. Cattle manure could be produced in greater abundance if only a little more care was taken in conservation. Litter should be used under the cattle in order to collect the urine and so increase the amount of manure available. Wood ash is available in quantity and could be supplemented by imported concentrated potash manures if the supply is not equal to the demand. I am informed that potato cultivation at Pulwanie on the Orissa side of the border is much more advanced than in the Agency tracts. The cultivation is spreading into the district round Koinjore and samples of mediumsized but fairly clean tubers were inspected from that side. The potatoes are said to be marketed round Russellkonda and on to Berhampur, but the total amount produced is reckoned to be small.

Potatoes are generally planted in September-October and harvested about December-January. I would suggest trying earlier planting in order to make the best use of the rainfall and to decrease the chances of drought in November and December stopping growth and so reducing the yield. By planting in ridges across the slope of the land, the potatoes should not suffer too much from water-logging even in the wet weather of August, while wash would be at least partially stopped by the ridges.

Sprouting of seed is practised at Koraput with good results, but difficulty is found when taking a single crop per year in keeping seed over from one harvest season till the next planting season. It is therefore usual to grow a dry weather crop under irrigation mainly for the production of seed. In Nanjanaad, an early main crop is planted at the end of March or beginning of April and harvested about July-August. The second crop is planted at the end of August or beginning of September (not on the same land as the early crop) and harvested about December-January. It is sometimes possible by early harvesting and forced sprouting in a warm room to have seed from the early crop ready for planting down the second crop, but this could not be done in the Agency districts owing to the higher temperatures and lower rainfall in the early months, preventing early planting of the first crop.

The holding over of seed from one season to the next occasions heavy loss up to 25 per cent or more if storing is not properly attended to and therefore the system of growing a crop under irrigation for seed purposes should be encouraged and the main crop taken under rainfed conditions. The occurrence of frost is liable to damage later grown potatoes considerably.

The cost of growing potatoes varies very largely with the labour and with the manuring given. Cattle power is cheaper than hand labour and should be utilized. The seed rate per acre will amount to about 15 cwt. medium sized potatoes, but this varies with the size planted. The cost of growing an acre of potatoes with 15 cwt. seed at Rs. 1-2-0 per maund of 25 lb. and manuring at a cost of Rs. 100 per acre will run about Rs. 200--250 per acre. Taking the yield as 5 to 1, the total harvested will be 75 cwt. per acre, i.e., about 337 maunds at Rs. 1-2-0 amounts to Rs. 380. The profit which may be expected therefore would amount to Rs. 130—180 per acre from which costs of transport to a market would have to be deducted.

(10) Possibilities of Agriculture.

I have given considerable thought to the possibilities of agriculture in the areas concerned and I have come to the conclusion that annual crops, such as cereals, pulses and industrial crops, are most suited for the tracts. These are already being grown on a considerable scale. Crops, such as paddy, niger, castor, turmeric, etc., are being exported in considerable quantity to the plains. Some of the castes are comparatively good cultivators and considerable care is taken in the cultivation of some crops, e.g., turmeric, as already mentioned.

At the same time, the great bulk of the hillmen are easy-going, even to the limit of laziness, and there appears to be very little demand among them for any form of knowledge on the subject, which forms their means of livelihood. Crops are sown in May-June and harvested usually in October-November. In many cases the straw is not even removed nor kept as fodder for the cattle. The latter are allowed to forage as best they can for themselves during the dry weather while most of their owners make merry on the fermented juice of the Solopo palm. The Solopo palm yields about 3 gallons of toddy daily and my information is that a gallon is sufficient to transport four men temporarily into paradise. Although while at G. Udayagiri, I demonstrated the manufacture of jaggery from Solopo palm juice, I have little hope that jaggery-making will attract as many devotees as

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toddy-drinking. With the exception of the levelled paddy fields, which receive all available manure, no manuring is done, but when fields show signs of lack of fertility, a new area which has been fallowed for a number of years, is brought under cultivation.

I submit therefore that unless and until their methods of agriculture are more stabilized, it is little use trying to do anything in the way of instruction in improved methods of cultivation, rotation, or manuring. Two agricultural demonstrators were sent to the Agency some time ago, but both were recalled and the attempt written down as a failure.

Over the whole area, the population at the 1921 census averaged 75 per square mile. Land is relatively plentiful, and so long as this is so, I cannot see how these cultivators are to be persuaded to settle down and cultivate one particular portion of land. It is only when this happens and the cultivator is up against the proposition of getting a living out of a given area of land, that the question of making the best use of such land arises. Once this question does arise, there is immediately a demand for knowledge and it is here that the functions of the Agricultural Department commence. I consider it useless for any member of the Agricultural Department to try to impart knowledge for which the cultivators have no desire, and this really raises the question of the education of the hillmen or the immigration of good cultivators from other districts.

(*a*) *Education.*—It is recognized that one of the best means of education is travel, and therefore I favour emigration of the hillmen to other parts of the country. Large numbers go annually to Assam and many of them return with an opener mind than when they left. Unfortunately these are mostly of the labouring classes and few of the real land-owners go. Two of the best cultivators I met, had served a certain time in jail and undoubtedly were the better of it. Unfortunately such compulsory educational methods cannot be used in all cases, but the employment of officers with an agricultural training in the Revenue Department might be considered. Such officers with agricultural knowledge and the authority of the Revenue Department might do some good and would stand a better chance of disseminating knowledge than an Agricultural Officer without such authority.

There remains also the possibilities of introducing agriculture as a subject in schools especially in Teachers' Training schools. Taking for example, the Elementary Teachers' Training School at G. Udayagiri, where 40 students are in residence (20 students per annum on a two-years course) it might be possible to introduce some form of agricultural training there. Photo No. 7 shows a group of these students in the school garden at G. Udayagiri. Behind the school building itself, there is an area of 40—60 acres which could be obtained and utilized as a small demonstration and training farm. If run under a good agriculturist, it would not only serve as a working example to students, but also to surrounding ryots.

The students work 25 hours per week divided into 30 periods from 10-30 a.m. to 1 p.m. and from 2 p.m. to 4-30 p.m. per day, Saturdays and Sundays excluded. It might be possible to work in three agricultural lectures and two practical classes of one hour each on week days before 10-30 a.m.

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and a practical class of three hours on Saturdays or Sundays. In this way, a certain amount of practical knowledge would ultimately permeate to the villages through the schools.

Two agricultural men would be required to run a farm of this sort and to do the necessary lecturing. The man in charge would have to be specially good as he would not only have to lecture, but also experiment with crops and rotations both in dry lands and paddy lands. Oriya is the official language in the district and the students are about half Oriya and half Khond. All teaching, therefore, has to be done in Oriya.

At Serango there is a similar school for the training of teachers for the Parlakimedi Maliahs. The students are partly Savara and partly Oriya and the official language is Oriya. In Jeypore there is a similar school where the students are Oriyas and Parasas taught in Oriya, while at Bhadrachalam mostly Telugu students are taught in Telugu. Whether there are possibilities at the three last mentioned schools for a scheme as suggested for Gumsur Udayagiri, I am unable to say.

The main object of such a scheme is to try to teach and interest the teachers to such an extent that their knowledge in turn will gradually permeate to the villages through the elementary scholars taught in the village schools. I do not consider it of much value to teach agriculture in middle schools as the scholar in the middle school is seldom going back to the land and any agricultural education given to him will be practically lost. On the other hand, a corps of rural teachers trained in agriculture, or at least having some practical and theoretical training in agriculture, should in an agricultural district, have at least some effect in creating interest and a demand for more knowledge, not only through the schools, but also through their intercourse with the adult cultivating population, the parents of the children in the schools.

The attitude of the hillmen towards education in general, however, is aptly illustrated by the case of the village teacher, who received one day a deputation of parents. The latter demanded half of the teachers' salary on the grounds that while the teacher supplied the teaching they supplied the children. If they declined to send their children to school, the teacher would lose his job and the only equable arrangement of the matter therefore was a fifty-fifty one.

(*b*) *Immigration of plains cultivators.*—While in some districts, there is a considerable amount of immigration, e.g., in G. Udayagiri where the population is 50 per cent hillmen and 50 per cent plainsmen, on the whole there is little immigration of actual cultivators. Even although thousands of plainsmen emigrate annually to Rangoon and other places, yet they seldom attempt to penetrate into the Agency tracts. Authorities tell me that this is mainly due to their fear of malaria. In pursuing my investigation about the sale of Agency oranges in Vizagapatam bazaar fruit-shops, I was definitely told by one man that loose jackets were not handled by him because, as they were grown in a malarious district, they carried malaria. On attempting to disprove this theory, several interested by-standers agreed with the shopman and supported his statement. A fearsome respect for the Agency was indicated.

(*c*) *Malaria.*—Malaria, therefore, may be considered as one of the most potent factors in the backwardness of the Agency. It is almost certain

that plainsmen would have emigrated there and developed the country to a larger extent than is found at present were it not for their dread of this scourage. Knowing something of the great work that has been done in some of the southern planting districts in the elimination of fever carrying mosquitoes, I was desirous of obtaining information about the actual carrier (or carriers), its habits, and its breeding places, but although I approached several of the medical men on the spot, very little information was forthcoming.

I take it that the breeding places are in the streams and the paddy fields through which these flow. The bunds of the paddy fields hold up a certain amount of water, making small ponds where mosquitoes breed. The numerous small streams with their deep and tortuous courses will prove most difficult places to clear up by direct attack against the larvæ by kerosene, etc., and I therefore would draw attention to the work of Willcox in Egypt and d'Herelle in the Argentine on this problem. Willcox states:

"That the Nile valley from Aswan to the Mediterranean is immune from malaria, but that there are places on the edge of the cultivation like Ismailia and the Kanka desert farm where malaria has been found, but they are not in cultivated Egypt and there are localities, which have been cut off from the cultivated area, where malaria will be found, while cultivated Egypt is immune. It is explained that the key to this immunity lies in the fact that mosquitoes must get the malaria germs themselves before being capable of passing on the infection and that there must be something in all leguminous plants especially in certain kinds of clover which makes mosquitoes immune and therefore they cannot pass on the germ.

There is no other reason, which can account for the outbreaks of malaria at Ismailia and Kanka desert farm where clear water oozes up in the sandy deserts which are devoid of the rich leguminous vegetation of the cultivated Nile valley.

This theory is supported by Dr. d'Herelle, who in a recent publication, emphasises the fact that the greater portion of the Argentine is free from malaria though mosquitoes abound in these regions and men with malaria from malarious districts are frequently found. In all the free regions there is a wild plant called Trebol de Olor (scented clover). Flowering takes place during the critical period of malaria from the beginning of summer to the end of autumn. The highly scented blossoms are frequented by the malaria mosquitoes, which feed upon the juice containing coumarin, a sugar syrup, which has an agreeable odour and is contained in all plants of the genus, and the most notable fact in this connexion is that Trobol de Olor, is not present in malarious districts.

To malaria-infected countries generally the advice of Sir William Willcox is that it would pay any malaria-ridden country to write to Washington and get information from people, who have first-hand information and are ready to give it, to buy the hardy sweet clover from local seedsmen in the Western States and begin operations in suitable gardens and nurseries, to send specialists to collect the seeds of the Trebol de Olor and local clovers in the Argentine; to get the wild clovers that grow under lupins and in the open in Northern Europe and South Egypt; to get seeds of the fodder crops of Egypt; and to get the coumarin beans and seeds from Guiana and Brazil and to plant them. He concludes by saying:

'that Malaria is such a terrible curse and its suppression over face of any country by changing malaria mosquitoes into benign ones would be such a blessing that no one responsible for regions where malarial fevers are the common heritage of the people should find it possible to contemplate cultivated Egypt's immunity from malaria and shrug his shoulders and do nothing'."

I apologise for quoting at such length but from any point of view the subject is a fascinating one and from an agricultural point of view doubly so, not only from the malaria suppression side, but also from the point of view of production of cattle fodder.

(11) Livestock.

Cattle are general all through the Agency tracts and practically every village has got its herd. During the wet weather, when feed is plentiful, they are in good condition, but during the dry weather, when food is scarce,

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they pass through a very bad time. Little or no trouble is taken to conserve excess grass or even the straw from the grain crops, to help them through the dry period.

The cattle on the whole, are small badly bred and poorly fed, but the country so far as I can see, is a very suitable cattle breeding one. Almost similar in elevation to the Mysore cattle country, there is no reason why cattle equally as good, could not be reared with some care and attention. On the hill sides, especially just after podu cultivation, grass is plentiful and on the 3,000 feet plateau between Pottangi and Koraput there is very little growth of jungle which might in time interfere with grazing areas.

With the opening up of the country by roads and the possible development of such forests as there are, an increased demand for good bullocks for transport purposes may be expected. Even if there is no demand on the hills, yet export of good cattle to the plains and further afield, would probably be a paying proposition. At present transport in the interior is mainly by pack-bullock and the load is varied according to the size and condition of the animal. With the improvement of roads, cart transport will be increasingly used for such work. In fact on the Jeypore ghat, transport is mainly done by buffaloes. These are bred mostly on the Parlakimedi side and appear to be out of country or cross-bred dams by Delhi or Muree sires. They are strong boned, well built, weighty animals and stand up to ghat work well.

To improve Agency cattle, a stocky medium-sized, thickly-built animal is to be preferred, and I consider a medium-sized Kangayam would be more suitable than either the Mysore or the Nellore and would be faster than the Scindi. I would suggest that a number of Kangayam bulls be placed at different centres in each district say—six in the Ganjam area and ten in the Vizagapatam district in selected villages. All other males capable of breeding in these villages would have to be castrated and the stud-bulls changed over every two years to prevent in breeding. Supervision of these stud-bulls could be done by the Veterinary Assistants attached to the different districts.

Feeding.—In order that stock may not depreciate to the same extent as at present during the dry weather, attention will have to be paid to conservation of fodder during the season of plenty. The hillsides are covered with grasses, most of them coarse which could be cut and made into hay or silage. Rotation of crops in the cultivated valley lands could be arranged in such a way that a considerable amount of fodder is produced for dry weather keep and if the question of the importation of leguminous crops for anti-malarial work is investigated, such plants as produce most fodder should be given preference.

Although malaria is reported to be present all the year round, I take it that a certain proportion of cases are relapses and that actual infection takes place when temperature and humidity give proper conditions. This will probably continue from about April or May onwards, but on this point I am open to correction. The point I want to emphasize is, that these legumes must be in flower at this period and in consequence will have to be grown under irrigation during the dry weather. It is therefore necessary that they be grown in all paddy lands commanded by a perennial streams and on the banks of the streams themselves where possible. Such green

fodder as is available from these sources during the dry weather will form a useful addition of green material to the available cattle food preserved as hay or straw or silage.

In addition, I would suggest the introduction and trial of Kikuyu and Rhodes grass, especially on the hill slopes, which are at present clothed with coarser and poorer grasses. Nurseries of Kikuyu may be formed in suitable places and contour strips about half-way up the hillsides, of 6—8 feet or more wide, cleared and planted with cuttings about 2 feet apart each way. Transplanting of cuttings from the nurseries into these strips should be done as early as possible in May or June to enable them to strike root and spread as much as possible before the dry weather starts in November—December. If 6—10 such plots were laid out on representative hills, it would soon become clear whether Kikuyu grass can flourish under the conditions and whether it is capable of withstanding the comparatively long drought. Seed of Rhodes grass may be sown at the beginning of the rains in areas which under the shifting system of cultivation, are considered to be unfit for further cropping. If these grasses are successful, I am sure, they will prove of greater value for stock-grazing than the rough herbage at present on the hillsides.

In Jeypore and Budragumma where paddy is milled in large quantities, the bran remains as a by-product, as it does not bear transport charges to the markets on the plains. This could be more largely used as an artificial food for cattle, not only for working cattle, but also for breeding stock during the dry period. There is undoubtedly ample food produced during the year if it was only properly managed and conserved to meet the needs of the dry weather.

In the matter of transport, it is interesting to report that the Diwan of Jeypore is now experimenting with charcoal suction-gas engines. With abundance of wood, charcoal is produced at a low rate and the gas produced, can be adapted for use on stationary engines, tractors, lorries or buses. These however will not eliminate the bullock or buffalo as a prime mover for the small cultivator and therefore I consider that the development of cattle-breeding and the further development of buffalo-breeding stands a very fair chance of success. One of the greatest boons in live-stock production is that the cattle can transport themselves, whereas all other products have to be transported If the article is bulky, and the market distant, costs of transport will so affect actual prices to the producers that production may be totally uneconomical; therefore all bulky and cheap products, e g., rice bran, which does not repay transport, should be fed to cattle. The new railways under construction will not seriously affect the position as transport of material to rail-head will still devolve on the bullock.

(12) Summary.

(1) Owing to the uneven distribution of rainfall in the Agency tracts, there are not such possibilities for the development of permanent crops as the total rainfall would indicate.

(2) Citrus fruits generally would appear to offer better prospects than crops as coffee, especially, if plantations can be irrigated or pot-watered. The development of markets for produce would increase the demand and stimulate further production.

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(3) Development of these tracts will have to be done mainly through the annual crops, but until such time as more established methods of agriculture are practised, it is very difficult to indicate any means whereby agricultural knowledge can be spread and improved methods introduced. Direct methods by posting agricultural demonstrators have already been tried without success.

(4) Cattle-breeding by the use of good type sires and improved feeding of stock by the means indicated, are sound improvements and appear to be the easiest of execution of those which can be suggested at the present time.

(5) Attention is drawn to the benefits which might accrue from the introduction of the grasses mentioned for fodder and also from the trial of various legumes both from the point of view of their effect on malarial mosquitoes and production of fodder for stock.

I take this opportunity of expressing my indebtedness to all those who helped me during my tour.

D. G. MUNRO,
Deputy Director of Agriculture, Coimbatore

II

Endorsement No. 943-F/28-1, Revenue, dated 31st July 1928.

[Agency—Development of Agriculture—Mr. Munro's report—
Letter from the Director of Agriculture, dated the 19th April 1928,
D. Dis. No. D/722 of 1927.]

Referred to the Board of Revenue for remarks.

(By order)

C. P. KARUNAKARA MENON,
Assistant Secretary to Government.

To the Board of Revenue (Land Revenue and Settlement) (with a copy of the letter from the Director of Agriculture and Mr. Munro's report).

III

Proceedings of the Board of Revenue (Land Revenue and Settlement), Mis. No. 612, dated the 28th February 1929.

H. G. STOKES, Esq., C.S.I., C.I.E., I.C.S.,
Commissioner of Land Revenue.

Read—the following papers :—

(i)

Endorsement from Government, Revenue Department, No. 943-F/28-1, dated 30th July 1928.

(ii)

Letter from C. A. HENDERSON, Esq., I.C.S., Agent to the Governor in Ganjam, dated Chatrapur, the 21st August 1928, D. Dis. No. 3524/26.

[*Reference.*—Board's Reference No. A. 3195/28-2, dated the 9th August 1928.]

I have read Mr. Munro's report with great interest. From personal conversation with him I had anticipated some of it and commented on the subject in my administration report for 1927–28.

2. I have always been of opinion that the problem of marketing is the first thing to be considered in dealing with questions of increased or improved cultivation. It was this that led chiefly to my condemnation of my predecessor's fruit garden at Bodigumma Hill near Lingagoda [paragraph (9) (v) of Mr. Munro's report]. The nearest market for fancy fruit is Calcutta. I regret that Mr. Munro was not allowed sufficient time to enable him to see the orange growing in the Parlakimedi Maliahs. Yet even here the market is occasionally glutted.

3. I think it would be feasible to start some form of agricultural teaching in the training school at G. Udayagiri. It would, in my opinion, be of more practical value than some at any rate of the subjects they are called upon to study. And the knowledge might in course of time filter down. But the teacher would have to be an exceptionally good man. I am not yet certain whether a similar scheme is required for or could be started at Serango.

Paragraph 10 (*c*).—I have commented on the general ignorance of the malaria carriers in this Agency in my administration report. It seems certainly probable that the paddy flats are the main source, but this cannot be said with certainty. In the copy of the report sent to me I find a marginal note against paragraph 6 (*a*) by the First Member of the Board. The water lying in the fields must have been an observation at G. Udayagiri of which it is a very recognizable picture. Water was standing in the paddy flats north of the bungalow there in March.

I was prepared to try some specimens of the African grasses myself at Chatrapur to see if they would make good. But I could not undertake to provide an irrigated nursery for 1,000 (*sic*) setts which were offered me from Hosur. And the missionaries at G. Udayagiri are too fully occupied with other branches of work to take up agricultural operations as propagandists. It is, in fact, very difficult to see how increased agricultural knowledge is to be disseminated otherwise than by a definite course of instruction at a training school, as suggested; and even then the process would

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probably be very slow. A little has been done in the way of making vegetable gardens at schools and police stations; but the dignity of labour is unknown and the necessity for it, I fear, inadequately appreciated. It has to be repeated that the desire for improvement in all forms of agriculture must come first and chiefly from the agriculturist.

(iii)

Letter from J. B. Brown, Esq., I.C.S., Government Agent, East Godavari, dated the 27th August 1928.

[Board's Reference No. A. 3195/28-2, dated 9th August 1928.]

I have the honour to state that Mr. Munro did not visit the East Godavari Agency and his remarks appear to be based on the conditions obtaining in Ganjam and Vizagapatam Agencies.

2. I have discussed the question with the Assistant Agents Polavaram and Bhadrachalam. The important fruit crop is oranges which are grown in the interior of the Chodavaram and Yellavaram divisions. The places are beyond the reach of metalled roads and are very malarial. Under existing conditions it is not practicable to develop this particular crop. The popular superstition is that these oranges carry malaria and this militates against the development of markets for them.

3. The development of agriculture cannot profitably be undertaken until transport facilities are provided by opening up new roads, measures for protection against malaria are undertaken and the general level of education is raised.

(iv)

Letter from G. T. H. Bracken, Esq., I.C.S., Agent to the Governor, Vizagapatam, dated 2nd October 1928, R.C. No. 798/28-G-1.

[*Reference.*—Board's Reference No. 3195/28-2, dated 9th August 1928.]

I have the following remarks to submit on Mr. Munro's report.

The time allotted for Mr. Munro's deputation was quite inadequat for him to obtain a real knowledge of the Agencies. Considerin the limited time at his disposal, Mr. Munro's observations seem to m remarkably accurate so far as they went and his conclusions generall sound.

2. The report rather conveys the impression that the whole of th Agency is a plateau 1,000—3,000 feet high and that the inhabitants are all backward and uncivilized. Though this is in the main true of Ganjam, it is only partly true of Vizagapatam and still less true of East Godavari which contains a considerable area of semi-plains country. Unfortunately Mr. Munro had no time to visit the Godavari Agency or he might have modified some of his conclusions.

In the latter two Agencies there are a large number of villages which practise settled cultivation both wet and dry, and some of them in Godavari have been surveyed and settled. In these villages conditions approximate to those in the plains and I can see no reason why the activities of the Agricultural Department should not be extended to at least these semi-plains areas at once.

Failing the appointment of Agricultural Demonstrators, the suggestion that selected officers of the Revenue Department may be given a course of agricultural training is worth consideration.

3. I do not think the training of schoolmasters in agricultural methods is likely to result in much practical results except in a few exceptional cases, but the curriculum of Agency schools might be better adapted to Agency conditions.

4. I agree with Mr. Munro that the first problem to be faced is that of malaria. No serious development of most parts of the Agency can be expected until malaria is to some extent controlled. I would suggest in particular that experiments be made in the cultivation of the clovers and other fodder crops which Sir William Willcox has recommended as producing conditions unfavourable to malaria as in the quotation made by Mr. Munro. I am attempting an experiment in this direction in connexion with the anti-malarial operations in Gudem Agency, but I find I need a trained agriculturist to conduct the operations with any real hope of permanent results. I am shortly submitting a report on the anti-malaria operations sanctioned in G.O. Mis. No. 832, P.H., dated 6th April 1928, and will suggest the appointment of an Agricultural Demonstrator to be stationed at Lammasingi. From there he will be able to supervise experiments in the four centres selected for anti-malaria work, investigate general agricultural conditions in different types of Agency villages and examine further the possibilities of citrus fruits.

5. As regards plaintain products and fruit trees, the Government have recently granted an area of 350 acres near Lammasingi (G.O. Mis. No. 1027, Revenue, dated 10th May 1928).

The experiments made by the lessees in coffee cultivation and fruit-growing will give valuable data for future development. Incidentally I may remark that the rainfall statistics of Lammasingi are quite untrustworthy. I find that the rain-gauge is situated in a thick garden overgrown by trees and that the schoolmaster who furnishes the figures does not really understand the measurements. I should judge that the figures in Mr. Munro's report are lower than the real rainfall. I have selected a site for a new rain-gauge, provision for which will I hope be made, and entrusted the registration of rainfall to the Health Inspector now stationed at Lammasingi.

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6. I agree generally with the conclusions in Mr. Munro's summary except in so far as he underestimates the extent of established methods of agriculture especially in East Godavari district.

Resolution—Mis. No. 612, *dated the 28th February* 1929.

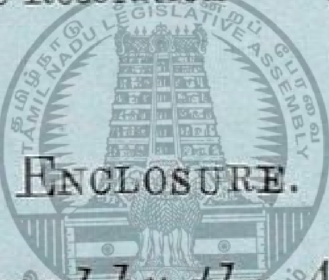
Submitted to Government.

2. The Board agrees with the views expressed at the Agency Conference held at Waltair on the 9th and 10th February 1929, a copy of which is enclosed.

(True extract)

B. G. HOLDSWORTH,
Secretary.

To the Secretary to Government, Revenue Department, with a copy of the Resolution No. 20 passed at the Conference.



ENCLOSURE.

Resolution No. 20 *passed by the Agency Conference held at Waltair in February* 1929.

20. *A consideration of Mr. Munro's report.*—(1) The Conference supports Mr. Munro's practical suggestions regarding cattle-breeding, etc., in paragraph 11 of his report. The Conference agrees with Mr. Munro that annual crops cereals, industrial crops fruit especially oranges and limes are most suited to the Agency. In general, the conclusions of paragraphs 8, 9 and 10 are accepted.

(2) Further it suggests that there should be a staff of Agricultural Demonstrators and one demonstration farm in each Agency. The activities of the staff should be confined to those parts of the Agencies where the population is more intelligent and more likely to benefit from instruction. In this respect the Conference differs from Mr. Munro. The farms would serve as places where selected men of the Agency staff could be sent for instructional purposes ; the men would be selected with reference to the interest and capacity they show in that direction.

(3) The question of agricultural teaching in schools might be left to future development but the curriculum of the schools should be given some kind of agricultural bias.

(4) The Conference notes with approval Mr. Munro's remarks about the importance of organizing markets. Marketing facilities will follow the opening up of roads and this aspect of the matter will be considered more in detail in items of the agenda dealing with communications.

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IV

Official Memorandum No. 1295-III/29, Development, dated 23rd March 1929.

[*Reference.*—Letter from the Director of Agriculture, D. Dis. No. D-722/27, dated 19th April 1928—Mr. Munro's report—Agency.]

An extract from the proceedings of the Agency Conference so far as it relates to Mr. Munro's report is forwarded to the Director of Agriculture who is requested to offer his remarks on the suggestions contained in paragraph 2 thereof.

(By order)

M. C. B. KOMAN,
Under Secretary to Government.

To the Director of Agriculture with extract.

V

Letter from R. D. ANSTEAD, Esq., C.I.E., M.A., Director of Agriculture, Madras, to the Secretary to Government, Development Department, dated Camp, Ootacamund, the 26th April 1929, D. Dis. No. D. 556/29.

With reference to Government Memorandum No. 1295–III/29–1, dated 23rd March 1929, I have the honour to offer the following remarks.

2. If the Agency Conference has decided that work should go forward in spite of the difficulties which have been pointed out by Mr. Munro, I desire to impress upon Government the necessity for dealing with the problem in a sound manner from the very beginning. If this is not done, no good will result. I would point to the direlict coffee station, Lammasingi, as a standing example of what should *not* be done.

3. In the first place, it is necessary to realize that no demonstration can be done until we have something to demonstrate and are quite sure that that something is correct. All demonstrations must be preceded by careful research and experiment. The first thing to do, therefore, is to establish one or more experiment stations in suitable localities to examine and obtain information upon the following points:—

(*a*) Suitable methods of growing various crops under the conditions obtaining in the Agency,

(*b*) suitable rotations of crops,

(*c*) suitable manures,

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(*d*) suitable treatment for permanent crops, and
(*e*) the necessity for irrigation.

On these points we have, at present, no information so far as the Agency is concerned, and therefore any talk of demonstration farms is premature as we have nothing to demonstrate. The difference between a demonstration farm and an experiment station and that it is essential to have the latter before the former is possible must be grasped, and if any permanent good is to be done unless results on which we can depend are first obtained on experiment and research stations mistakes are certain to be committed and such mistakes would make future work still more difficult and would be worse than leaving matters as they are at present.

4. Each of the experiment stations must include dry crops, paddy, and permanent crops like limes, oranges, mangoes, etc. I would suggest the following areas as a minimum for each station :—under dry crops 25 acres, paddy rain-fed and swamp 15 acres, and citrus and other fruits 10 acres—a total of 50 acres.

5. It will be necessary to have really sound men in charge of these stations with a knowledge of the language. Where these men are to be found it is difficult to say. We have all too few men now in the department really capable of taking charge of experiment stations and few of these are Telugus. Those in charge of our existing experiment stations cannot possibly be spared. It would be a pity to waste the good well trained men we have now got in malarial places where the chances of doing really good work are vague and not nearly so promising as they are in the plains where we have already made considerable advance. It will, I think, be admitted that the work we are already doing should not be checked or in any way sacrificed to the Agency.

6. This being so, the Agency stations and their staff will have to be gradually built up. The best way to do this is for the Agency Conference to select six men immediately to be sent to the Agricultural College in July next for training, with scholarships, if necessary, and on the distinct understanding that after taking their B.Sc. Ag. degrees they will return to the Agency and be posted on the experiment stations there. The College course takes three years so that no time should be lost if this plan is to be adopted. In the meanwhile, sites for the stations may be selected, the land acquired, and the stations generally got ready for work. After this, I would suggest that two men per annum are chosen in a similar way and sent to the College in order to maintain staff. It should be realized at the very beginning that in this locality it will be necessary to have a big leave reserve as there are bound to be casualties due to malaria.

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7. The first thing to do after getting the experiment stations started will be to study as closely as possible the local agriculture and conditions and correlate these with experiments tried out on the stations. This will give time for the local men to settle down and get to know their work and the local conditions thoroughly. It is quite useless to send raw-graduates straight from College into the districts and expect them to do any good. They must have preliminary training on a farm to learn the work which they will have to do.

8. When the stations have been running for some years and the staff have been trained and have thoroughly learned the local conditions and their relation to the results of experiments conducted on the farms sufficient knowledge will have been acquired to utilise it for instructional purposes and actual demonstrations can then begin and only then.

9. I am convinced that if any permanent good is to be done and effort and energy not frittered away this is the only way in which work can be taken up in the Agency and that it is quite useless trying to do anything in a hurry. As I have said before, we have no staff which we can send out at once into the Agency and even if we had we have nothing to demonstrate and therefore we could do no good at all.

10. If Government agree with my views, as I trust they will, I would point out that no provision has been made in my re-organization scheme or in my ten-year programme submitted with my letter R.O.C. No. A. 662/28, dated 29th August 1928,* for work of this sort and it must be provided for in the budget of 1930–31 quite separately and in addition to the programme laid down in my letter. In this connection, I would call attention to paragraph 170 of my letter quoted above in which I stress the point that the programme of work therein laid down, and which has now been accepted by Government, to have the first call on such funds as can be spared and that it should not be altered or detracted from to find money for other schemes and if at any time during the next ten years covered by my programme it is decided to take up any work not included in it then the funds for doing so must be provided as an extra item. These Agency proposals appear to me to be a case in point and if they are to be taken up, I would request that the money for it be found as an extra allotment in 1930–31 over and above that forecasted in my programme.

* Not printed.

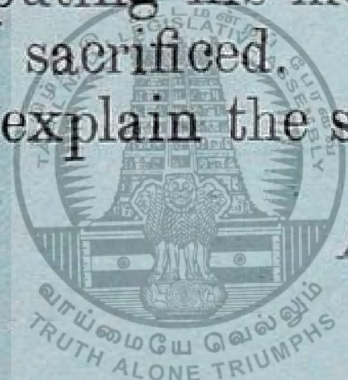
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VI

Official Memorandum No. 1295 III/29-2, Development, dated 4th June 1929.

[Letter from the Director of Agriculture, D. Dis. No. D. 556/29, dated 26th April 1929—Mr. Munro's report on the Agency.]

In paragraph 6 of his letter read above the Director suggests that six men should be trained at the agriculture college for work in the Agency. The result of this would be that no work could be started there for at least three years. The Government consider that experimental work in the Agency is urgent and likely to prove of great value and they cannot therefore agree to its postponement for that period. In the other departments of Government, permanent officers of the regular service are posted to the Agency for a term of years and it is not clear why a similar course should not be followed in this case also. The Government are also unable to understand the statement of the Director that he is unable to spare any men for the Agency and that by deputing his men for the Agency the work in the other parts will be sacrificed. The Director is requested to reconsider the question and explain the situation more clearly.



A. McG. C. Tampoe,
Secretary to Government.

To the Director of Agriculture.

VII

Letter from G. R. Hilson, Esq., B.SC., Officiating Director of Agriculture, to the Secretary to Government, Development Department, dated Camp, Hosur, the 12th October 1929, D. Dis. No. D. 877/29.

I have the honour to reply to Memorandum No. 1295–III/29–2, dated the 4th June 1929.

2. I regret that I have not been able to reply to this reference sooner as I took charge at a very busy time and as I am still in process of finding out exactly what is going on in the department, a complete knowledge of which is necessary if an exhaustive reply to the memorandum in question is to be given.

3. I am in entire agreement with the views expressed by Mr. Anstead in his letter No. D. 556/29, dated the 26th April 1929.

We have not yet got anything like the number of Telugu men that we require for work in the Plains, where we are in a position to carry out propaganda work which is not the case in the Agency. If an experimental station is to be opened in the Agency immediately we shall have to withdraw men from the tracts in which we are

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already at work in order to man this station. We shall, therefore, increase the shortage which is already bad enough and we shall be working entirely contrary to our own declared policy of concentrating our energies and not to dissipate them.

4. Conditions in the Agency are not nearly so severe as they are in the Ceded districts or in parts of Coimbatore district. There are two lines of work crying out for immediate attention (*a*) the improvement of agriculture in areas where the soil is light and the rainfall low and precarious, e.g., Anantapur district, and (*b*) the determination of the best use to make of water on the light well drained soils to be found in Coimbatore and Salem districts. These, I submit with due deference, are items of greater urgency than the opening of a station in the Agency. The latter of these two items of work will, in fact, produce results which will be of value in the Agency when work is started there.

5. I therefore request that the Government will be pleased to adopt the suggestion made by Mr. Anstead in paragraph 6 of his letter which I have quoted.

VIII

Official Memorandum No. 4730-III/29-1, Development, dated 13th November 1929.

[*Reference*—Letter from the Director of Agriculture, D. Dis. No. D. 722/27, dated 19th April 1928—Mr. Munro's report on the Agency.]

The Director of Agriculture is requested to offer his remarks at a very early date in consultation with the Director of Veterinary Services on the suggestion contained in paragraph 11 of Mr. Munro's report regarding the stationing of Kangayam bulls in selected villages under the control of Veterinary Assistant Surgeons.

The reference may be treated as very urgent.

S. V. RAMAMURTI,
Secretary to Government.

To the Director of Agriculture.
Copy to the Director of Veterinary Services.

IX

Letter from G. R. HILSON, Esq., B.SC., Officiating Director of Agriculture, to the Secretary to Government, Development Department, dated Camp, Poosa, the 5th December 1929, D. Dis. No. D. 1779/29.

I have the honour to refer to Memorandum No. 4730-III/29-1, dated the 13th November 1929.

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2. I have discussed this matter with the Director of Veterinary Services. We are of opinion that the bulls should be stationed near veterinary institutions. There is at present only one such institution at Jeypore. Therefore, for the present, only one bull can be placed at stud in the Agency tract.

Copy to the Director of Veterinary Services.

X

Official Memorandum No. 4730 III-29/2, dated 14th December 1929.

[*Reference*—Letter from the Director of Agriculture, dated 5th December 1929, D. Dis. No. D. 1779/29.]

In the above letter it is stated that breeding bulls could be stationed only near veterinary institutions and that there being only one such institution at Jeypore only one bull could be placed at stud in the Agency tract. The Government observe that there are three veterinary dispensaries in the Agency at Jeypore, Bhadrachalam and Polavaram and four touring veterinary assistants with headquarters at Russellkonda, Koraput, Bhadrachalam and Polavaram. It is not understood why the bulls should not be stationed at all these institutions or kept in charge of important ryots or with co-operative societies in the Agency and the touring veterinary assistants asked to supervise them. The Director of Agriculture is requested to offer his remarks on the above suggestions at a very early date in consultation with the Director of Veterinary Services. One bull for the whole of the Agency will hardly be enough. Mr. Munro recommended that sixteen bulls should be stationed.

This may be treated as very urgent.

S. V. RAMAMURTI,
Secretary to Government.

To the Director of Agriculture.

XI

Letter from the Director of Agriculture, Madras, to the Secretary to Government, Development Department, dated the 20th December 1929, R.O.C. No. D. 1954/29.

I have the honour to refer to Memorandum No. 4730–III/29–2, dated the 14th December 1929, Mr. Munro's suggestion was that sixteen bulls should be placed at stud in the Vizagapatam and Ganjam Agencies. I therefore limited my consideration of this proposal to those two Agencies. As Jeypore is the only place in either of these Agencies at which there is Veterinary institution there was only one place to suggest.

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2. It now appears that Godavari Agency is to be considered. This being so I have no objection to bulls being placed at Bhadrachalam and Polavaram. We have already a bull at Koraput and Russellkonda is not in the agency.

3. This provides for three bulls. If three more are required then they will have to be placed in charge of co-operative societies which can be trusted to look after them. On this point I have no information.

Order—No. 246, Revenue, dated 8th February 1930.

Recorded.

2. The Agency Conference which met at Waltair in February 1929 considered Mr. Munro's report on the development of agriculture in the Agency tracts. The chief recommendations made by the conference were (1) that there should be a staff of agricultural demonstrators and one demonstration farm in each Agency, and (2) that a number of Kangayam bulls should be placed in selected villages in the Agency tracts. These recommendations are under the consideration of the Government and orders on them will issue separately in the Development Department.

(By order of the Governor in Council)

H. R. PATE,
Secretary to Government.

To the Board of Revenue (Land Revenue and Settlement).
,, Agent to the Governor, Ganjam.
,, ,, Vizagapatam.
,, Government Agent, East Godavari.
,, Development Department.
,, Local Self-Government Department.
,, Law and Education Department.
,, Public Works and Labour Department.
,, Secretary to the Legislative Council (with 175 copies).
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